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The Wilson Bulletin

Official Organ of the Wilson Ornithological Club

and

The Nebraska Ornithological Union

(in affiliation)

59 B2, Ol, Ma

An Illustrated Quarterly Magazine Devoted to the Study of Birds in the Field

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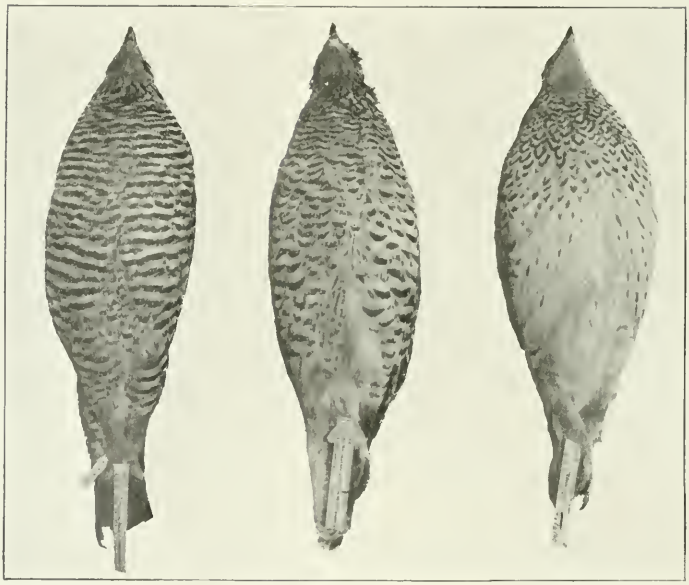
Edited by Lynds Jones

Nineteen Hundred and Eighteen

Old Series, Volume XXX New Series, Volume XXV

Published by the Club at Oberlin, Ohio

14-78526-Fd.11



Tympanuchus americanus

Hybrid

Pediocetes p. campestris

THE
WILSON BULLETIN
NO. 102
A QUARTERLY JOURNAL OF ORNITHOLOGY
VOL. XXX MARCH, 1918 NO. 1
OLD SERIES VOL. XXX. NEW SERIES VOL. XXV.

A STRANGE CASE OF HYBRIDISM.

BY F. C. LINCOLN.

Among certain families the inter-breeding of species or even genera, is not of rare occurrence; hybrid juncos, ducks, etc., having been taken in numbers; but among the Gallinae (exclusive, of course, of domestic fowls and pheasants) such instances are decidedly uncommon if not rare.

The accompanying illustration portrays an example of this character, a cross between a Prairie Chicken (*Tympanuchus americanus*) and a Prairie Sharp-tailed Grouse (*Pedioecetes p. campestris*) the result, in all probabilities, of the somewhat peculiar conditions existing in Colorado.

The two forms came into Colorado from the east, coincident with agricultural activities, and are found during the winter months associated in the same flocks, though the bulk of numbers is generally in favor of Tympanuchus.

It will be noted that the elements of Tympanuchus have predominated, giving the breast the wide bars characteristic of this genera; although curved and broken sufficiently to exhibit the influence of Pedioecetes. These markings also become smaller and still more broken on the belly, another character found in Sharp-tails. The tail, though with much of the Prairie Chicken character in form, still has the large white areas peculiar to Pedioecetes, and even has the two central feathers decidedly elongated. And last but by *no* means least, is the suggestion of the pinnated feathers of Tym-

panuchus on the side of the neck, although these measure but 28mm., while on a cock Chicken of the same season they will average 65mm., and 45mm. on the hens.

BIRDS OBSERVED NEAR MINCO, CENTRAL OKLAHOMA.

BY ALEXANDER WETMORE.

From May 23 to June 2, 1905, I was at Minco in central Oklahoma devoting my attention to the study and collection of the various forms of bird-life found. At that time the region was still known as Indian Territory and great stretches of prairie had been newly broken. Though the country was well settled there was still much land in its original condition, and birds were very common. The period spent here corresponded with the end of migration and the beginning of the breeding season. The notes given refer in the main to breeding birds, concerning which there are few published records from Oklahoma.

The country in which I collected was diversified in its character. A small stream known as Boggy Creek passed near Minco; there was a large slough nearby, and three and one-half miles east was the South Canadian River. The latter stream is often dry for months at a time, showing merely an expanse of shifting sand that drives and drifts with the winds. At this period, however, it contained running water, and before the first of June flood water had carried away bridges crossing near Minco and farther down at Tuttle. Willows and rushes bordered the slough, and thickets and small tree growth followed the winding course of Boggy Creek. Dense growths of wild plum were common, and there were small groves in hollows on the rolling prairie. Cottonwoods grew along the South Canadian River, but few of them attained any great size. Fields in the river bottom that had been cultivated at one time were grown with weeds, while areas of unbroken prairie supported dense stands of grasses, with rosin weeds at intervals offering outlooks for the Grasshopper Sparrows.

On May 31, in company with Marvin Woodworth, I drove to Bacon's Ranch, not far from Leal, Oklahoma. Here we found high upland country, with gullies and ravines cutting into it. I had hoped to secure the Black-headed Vireo (*Vireo atricapillus*) here, but was disappointed. The prairie country traversed this day fairly swarmed with Nighthawks, and among those collected two forms were identified.

In the town of Minco yards were planted in trees and some lots were given over to growing orchards. These were attractive to many birds that fed and nested fearlessly about the houses. During the long hours passed in preparing specimens and writing notes, I heard Bell's Vireos, Nonpareils, and Mockingbirds singing constantly, and the birds themselves were often in sight; while species familiar to me in more northern localities were equally common. The breeding birds near Minco presented a curious admixture of southern, eastern, and western elements. *Muscivora forficata, Thryomanes b. crypus,* and *Penthestes c. agilis* may be enumerated as lower austral forms here not far from the northern limit of their ranges. Among eastern (and northern) breeding birds may be mentioned *Dryobates p. medianus, Myiochanes virens, Agelaius p. predatorius, Sturnella m. magna* and *Icteria v. virens.* And among western forms were *Zenaidura m. marginella, Otocoris a. leucolaema, Sturnella neglecta, Chondestes g. strigatus, Guiraca c. lazula* and *Mimus p. leucopterus.*

In the following list notes are given on 62 species and subspecies of birds:

1. *Sterna antillarum antillarum* (Lesson).—Least Tern.

Fairly common. Three adult males were taken. The Least Tern was found from May 24 on along the South Canadian River. Here they worked systematically over the water with quick, graceful flight, on the lookout for the minnows that formed their food. At times one or two came to a slough near town in company with Black Terns. On May 26 they were mating and were often seen in pairs, pursuing each other with harsh call notes, high in the air. No nests were found. It may be that these birds breed farther north on the Cimarron or Arkansas Rivers and were here in migration.

The South Canadian usually goes dry in summer and would not furnish a certain food supply throughout the season.

2. *Hydrochelidon nigra surinamensis* (Gmelin).—Black Tern.

Common; migrating. Five were collected. May 26 twenty-five or more were seen over a small slough, beating gracefully back and forth and dipping into the water in feeding. When I waded out the flock at first kept at a distance, but in a few minutes the birds were all around me. All were in full plumage. A few more were seen here on May 29, among them a male in molt from winter to breeding plumage. This bird I shot. All that I examined had fed on insects.

3. *Querquedula discors* (Linnaeus).—Blue-winged Teal.

An adult male was taken on May 29 on a small slough. This individual had an injured wing so that there is no reason for considering it a breeding bird.

4. *Marila affinis* (Eyton).—Lesser Scaup Duck.

Two adult females were taken, one on May 26 and one on May 29. On these dates four or five others were observed on the slough. One of the birds taken had been crippled and it may be that the others were in the same condition. All of those seen were females. I have seen other bluebills in early summer in localities south of their normal breeding range, but have always considered them cripples from shooting, birds that have been injured in some other way, or individuals that for some reason are barren and have been left behind. Summer specimens that I have collected at Lake Koshkonong, Wisconsin, (June 16), and at the Laguna de Guánica, Porto Rico, (May 26) have been birds with injured wings. Never have I seen any indication of their breeding, though this has been recorded in various localities.

5. *Branta canadensis canadensis* (Linnaeus).—Canada Goose.

On May 26 a Canada goose was seen flying north up the South Canadian River.

6. *Fulica americana* Gmelin.—Coot.

Fairly common on the slough. May 26 an adult female was taken. May 29 I found about twenty-five here and considered them breeding birds. They spent most of their time hidden in the rushes of the marsh, but when flushed went out into open water. Their loud notes were heard often.

7. *Helodromas solitarius* (Wilson).—Solitary Sandpiper.

On May 25 and 27 single birds were heard calling in flight during the evening.

8. *Actitis macularia* (Linnaeus).—Spotted Sandpiper.

One seen along the South Canadian River May 26.

9. *Oxyechus vociferus vociferus* (Linnaeus).—Killdeer.

A few pairs were breeding in wet localities near Minco. Individuals were recorded May 25 and May 26.

10. *Colinus virginianus virginianus* (Linnaeus).—Bob-white.

Quail were common in the rolling country west of Minco, and at this season males were whistling and calling from the borders of the canyons. They were seen often running along the roads and when startled flew over into the wheat fields that extended on either side. Clumps of sumac along the canyons were favorite hiding places, from which they flushed with roaring wings. Females must have been incubating at this time as few were seen. Two adult males were collected near Leal on May 31. These show no approach to *C. v. texanus*.

11. *Zenaidura macroura marginella* (Woodhouse).—Western Mourning Dove.

Abundant. These doves were breeding at this season. One set (probably incomplete) containing a single fresh egg was collected from a nest made of a few rootlets and bits of grass placed on the ground in a cornfield. Another set of two eggs (fresh) was taken from a nest placed two feet from the ground on a mass of driftwood along the South Canadian River. Both of these were taken on May 26. An adult male taken May 31 is typical of this subspecies.

12. *Cathartes aura septentrionalis* Wied.—Turkey Vulture.

A common species that was seen daily.

13. *Buteo borealis borealis* (Gmelin).—Red-tailed Hawk.

Red-tailed hawks were fairly common. They were recorded on May 23 and 29.

14. *Coccyzus americanus americanus* (Linnaeus).—Yellow-billed Cuckoo.

Tolerably common. An adult female was taken on May 23 and another on May 29. The birds were found in small groves with dense undergrowth. The two specimens taken measure as follows:

No. 1123 (Coll. A. W.) ♀, May 23, 1905, wing 145 mm., tail 139.5 mm.

No. 1160 (Coll. A. W.) ♀, May 29, 1905, wing 141.3 mm., tail 130.5 mm.

15. *Streptoceryle alcyon alcyon* (Linnaeus).—Belted Kingfisher.

A few kingfishers were nesting near Minco. I saw them fishing about a small slough and found several nesting holes in a railroad cut near the South Canadian River. May 23 a bird was seen perched near these nests with a minnow in its bill so that there may have been young at that date. An adult male collected May 24 has the following measurements:

Length, 299 mm.; wing, 154 mm.; tail, 87.5 mm.; exposed culmen, 58 mm.; tarsus, 10 mm.

16. *Dryobates pubescens medianus* (Swainson).—Downy Woodpecker.

On May 31 a pair of these woodpeckers was taken in a small canyon near Leal, and with them a single young male, recently out of the nest. All were working about in the branches of a cottonwood. The two adult birds have the following measurements:

No. 1183 (Coll. A. W.) ad. ♂, wing 92 mm., tail 52 mm.

No. 1197 (Coll. A. W.) ad. ♀, wing 93 mm., tail 53 mm.

These two birds, while intermediate in measurements between *pubescens* and *medianus* are nearer the latter form. The underparts are much stained, but the color is that of *medianus*. The breast and abdomen are clearer white than in specimens of *D. p. pubescens* from Christ Church Parish, South Carolina, and from Florida, examined in the United States National Museum. The immature bird is in juvenal plumage, with the black of the upperparts tinged with slate and the feathers of occiput and crown tipped with red. The nuchal band is barely indicated.

17. *Melanerpes erythrocephalus* (Linnaeus).—Red-headed Woodpecker.

Red-heads were tolerably common about scattered groves of trees on the prairie and were seen in the town of Minco.

18. *Centurus carolinus* (Linnaeus).—Red-bellied Woodpecker.

A few Red-bellied Woodpeckers were found in small groves near Minco (recorded here on May 24). On May 31 several were found in the wooded canyons west of town.

19. *Colaptes cafer collaris* Vigors.—Red-shafted Flicker.

Flickers were rare at this season. Only two were seen, one May 26 and another May 31.

20. *Chordeiles virginianus howelli* Oberholser.—Howell's Nighthawk.

This is the breeding form of Nighthawk in the region around Minco. It is represented by skins of eight males taken May 24, 26 and 31 and a female secured on May 31. Three of the birds taken (Coll. A. W. Nos. 1132, 1186, and 1188) are grayer and have less ochraceous in the pale markings of the dorsal region than typical *C. v. howelli*, in this verging toward *sennetti*. However, all three have the ground color of the upper parts dark with a more brownish cast than is found in *sennetti* and I consider them merely pale individuals of *C. v. howelli*. All of the other skins are typical of this form.

Nighthawks were abundant during the period that I collected at Minco and were seen daily. Many were found perched on drift

wood along the South Candian River, and on the uplands they were seen on the ground or on fence posts. On May 31 one was seen sitting across a wire on a fence as any perching bird might do. When flushed it flew to another wire and again alighted across it. The courtship antics of the males were observed daily. Mounting sixty or eighty feet above the female the male would turn and dash down past her, turning abruptly, decurving the wings strongly, and at the same time producing the familiar whirring boom. Their loud call notes came to my ears constantly. No nests were seen.

21. *Chordeiles virginianus henryi* Cassin.—Western Nighthawk.

A male secured May 24 and two females shot on May 31 represent this form. The male and one female are typical, while the other female is intermediate between *C. v. henryi* and *howelli*. In the first two the upper parts are strongly suffused with tawny and in all three the paler markings are much more rufous or reddish than in *howelli*. These birds were without doubt migrants following up the South Canadian River to breeding grounds about its headwaters in New Mexico. This is the most eastern record for this subspecies as restricted by Oberholser, and the birds secured were some distance from their breeding range.[1] Nighthawks are often late migrants so that these May specimens are not notable in respect to the time at which they were taken.

22. *Muscivora forficata* (Gmelin).—Scissor-tailed Flycatcher.

Common. One male was secured May 24, one female on May 25 and four males on May 26. These birds were found in the open country usually where small trees or bushes afforded perches. The males were conspicuous, the females seen seldom. From the number of these flycatchers observed on May 26, I believed that part were still in migration. The call note was a harsh, sharp note, somewhat like that of *Tyrannus tyrannus*. The flight was straight, with the tail at times opening and closing. Males in display often varied this direct flight by a series of quick zigzags up and down, with the tail opening and closing and the bird calling loudly, a crazy skydance brilliant with vivid color. The whole performance reminded me of one of the "nigger chasers," whose blazing, erratic course delights the small boy on our great national holiday. Males seemed conscious of their conspicuous appearance and were wild. Often they flew ahead of me out of range, lighting on small bushes, weed stems, or even on the ground when out on the open prairie. May 25 I found a nest half completed, built of down from the cottonwoods and strippings from weathered weed stems. It was placed in a bush six feet from the ground, with no attempt at con-

[1] Oberholser, H. C., Monograph of Genus *Chordiles*, Bull, 86, U. S. Nat. Mus., 1914, p. 65.

cealment. No other nests were observed. These birds are known locally as Scissor-tails and Birds of Paradise.

The males collected have the inner webs of the outer pair of rectrices slightly constricted for a short distance above the terminal black tip. In addition the outer webs of these same feathers are broadened distally, forming a somewhat expanded tip. The single female examined has no trace of a concealed colored area on the crown.

23. *Tyrannus tyrannus* (Linnaeus).—Kingbird.

A common species. No other kingbird was found about Minco.

24. *Myiarchus crinitus* (Linnaeus).—Crested Flycatcher.

A common bird in the shade-trees of Minco and in the small groves scattered through the country. On June 1 a female started a nest in a bird house placed on a pole in a garden at my uncle's home in town. The male gave no assistance in carrying material.

25. *Myiochanes virens* (Linnaeus).—Wood Pewee.

Tolerably common; breeding. An adult male was collected on May 23.

26. *Empidonax virescens* (Vieillot).—Acadian Flycatcher.

One seen on May 31.

27. *Otocoris alpestris leucolaema* (Coues).—Desert Horned Lark.

Common, breeding. These Horned Larks were found everywhere across the rolling prairie, especially on the higher portions away from streams. A few frequented cornfields in which plant growth was still small. Males were singing constantly, and to my ear the song was slightly different from that of *O. a. praticola* of eastern Kansas. Once I watched a male singing in flight as he sustained himself against a strong wind for three or four minutes and then pitched quickly to earth. Broods of young with their parents were seen in the roads on June 2. A male and a female were collected on May 24, and another female was taken May 25. The male, while not typical, is nearer *leucolaema* than *praticola*, toward which it tends. There is practically no yellow in the superciliary stripe, but above it is much paler than breeding males of *praticola* from Independence, Kansas. The females resemble typical *leucolaema* much more closely than does the male. They are very slightly darker than the average of that form, but may be distinguished as *leucolaema* without hesitation. Mr. H. C. Oberholser has been kind in examining these birds for me.

28. *Cyanocitta cristata cristata* (Linnaeus).—Blue Jay.

Tolerably common. Seen on May 25 and 27.

29. *Corvus brachyrhynchos* Brehm.—Crow.

Tolerably common. Crows were seen on May 24 and 28. No specimens were taken. Examination of breeding birds will prob-

ably show that they are *Corvus b. paulus* Howell.[1] During winter typical *Corvus b. brachyrhynchos* should occur.

30. *Molothrus ater ater* (Boddaert).—Cowbird.

Common. Eight were noted on May 23 and others were seen each day until my departure. On May 24 an egg was found in the nest of a Bell's Vireo.

31. *Xanthocephalus xanthocephalus* (Bonaparte).—Yellow-headed Blackbird.

Tolerably common. May 25 I found a small flock of females and young in juvenal plumage feeding in a newly cut alfalfa field. An adult female was collected. Other yellow-heads were seen on May 26.

32. *Agelaius phoeniceus predatorius* (Wilson).—Red-winged Blackbird.

Common. Red-wings were breeding about the slough below the town of Minco. An incomplete set of two eggs (fresh) was collected there on May 26. The nest was placed two feet from the water in the top of a small willow at the border of the pond. An adult male collected May 23 agrees in subspecific characters with *A. p. predatorius*. The wing measures 118 mm., the tail 93 mm., and the culmen (from base) 23 mm.

33. *Sturnella magna magna* (Linnaeus). Meadowlark.

Common everywhere about Minco. Breeding. Four were seen May 23 and individuals were observed daily from that date until my departure. This species was the dominant meadowlark, greatly outnumbering the western species. No specimens were collected. It is possible that the records here given belong under some other subspecies than *S. m. magna*.

34. *Sturnella neglecta neglecta* Audubon.—Western Meadowlark.

Tolerably common; breeding. Western Meadowlarks were found scattered over the prairie about Minco. Birds were seen on May 23 and 25. On May 26 I found a mated pair near the South Canadian River and collected the female. On May 31 a few others were found in driving to Leal. In the area covered both species of meadowlark breed, but the western form is much more rare than the eastern.

35. *Icterus spurius* (Linnaeus).—Orchard Oriole.

Common; breeding. Eight of these birds were observed May 23, and the species was seen daily during my stay at Minco. A male and a female were taken May 24. On May 26 I collected a set of five fresh eggs near the South Canadian River. Orioles were common there in the cottonwoods, but were difficult to see as the strong

[1] Howell, A. H., Proc. Biol. Soc. Washington. XXVI, 1913, pp. 199-202.

wind kept the leaves in constant motion. As I watched, a female Orchard Oriole flew into the top of a small cottonwood, and on looking closely I discovered a nest. Several sticks thrown into the tree failed to frighten off the parent nor would she leave until I began to climb the trunk. The nest was made of grass stems that had been gathered while green, but which were now faded. It was attached by the rim, and small twigs were woven firmly into the sides and bottom. The nest contained five fresh eggs.

The male bird collected is in second year plumage, but has the upper and lower tail coverts, abdomen and lower chest washed with chestnut, a few black markings on crown and scapulars, and the external rectrix on the right side black.

36. *Icterus galbula* (Linnaeus).—Baltimore Oriole.

Fairly common; breeding. One was seen May 24 and an adult male was collected May 26 in the cottonwoods along the South Canadian River.

37. *Quiscalus quiscalus aeneus* Ridgeway.—Bronzed Grackle.

Common; breeding. An adult female in rather worn plumage was taken May 25. On this day I found a breeding colony numbering between thirty and forty pairs in a small grove. The nests were placed from seven to thirty feet from the ground. Most of them contained young. I collected one set of four fresh eggs from a nest about seven feet from the ground. This nest was made of grass, weed stems and leaves, with a cup of hardened mud lined with fine grasses. A second set that I collected was so badly incubated that it could not be preserved.

38. *Astragalinus tristis tristis* (Linnaeus).—Goldfinch.

A few seen.

39. *Passer domesticus* (Linnaeus.)—House Sparrow.

Common in the town of Minco.

(TO BE CONCLUDED.)

LOUISIANA BIRD REFUGEES.

BY ALFRED M. BAILEY.

Louisiana is the winter home of the millions of migratory birds that push northward each year as spring melts the icy barrier between the north and the south. And because Louisiana has the inheritance of the rest of the nation in her keeping, she has a great responsibility that has not been realized until within the last few years.

For a long time now this state has been considered one of the black sheep of the country in the protection of our wild fowl, and much of the criticism of the past has been well founded. Indeed, that is what makes present day difficulties so hard to overcome; and yet, through the efficient work of the present Commissioner of the Department of Conservation, Mr. M. L. Alexander, with the sincere coöperation of a few true sportsmen, notably, Mr. E. A. McIlhenny of Avery Island, La., the state is now able to take her place in the front rank in conservation of our wild life. Through the generosity of Mr. McIlhenny and other wealthy people, there have been given the state four vast areas amounting to a total of over 180,000 acres of marsh land, where birds may rest and feed, secure from molestation. And that the birds take advantage of this great refuge, may be seen by the number of mallards that were caught in a run of sixty muskrat traps. Thirty-eight mallards were taken from sixty traps in a single day, and the swamp men do not set their traps in favorable places for birds, either.

I have never seen Louisiana reported as a great state for birds; in fact, I aways thought of Florida as being the bird state of the union. Louisiana is not limited to game birds, but has her great heronries that include practically ninety per cent of the Snowy and American Egrets of the country, according to statistics given me. Also Roseate Spoonbills, Wood Ibis, Wards, Louisiana, Little Blue and Green herons, White and Glossy Ibis, and Sandhill Cranes are among our breeding birds. These heronries were guarded by men with winchesters this spring, and gradually the "cajuns" in that

part of the country are learning to leave the young birds alone.

Then on the outlying marshes and islands are the thousands of sea birds, the beautiful Royal, Caspian, Cabot, Least and Forester terns, the graceful Laughing gulls, and the swift flying skimmers. It is easy for the inland states to criticize when it appears there have been violations of the law, but only when one has traveled over these different bird refuges can the enormous task of patrolling such a great area be realized, and the impossibility of preventing all slaughter. The Commission has more than a dozen boats, in charge of competent men, and the reservations are constantly guarded, so that men no longer shoot out the colonies of egrets, leaving the young to die, nor rob the nests of the Roseate Spoonbill because the young are considered good eating. You would be impressed by taking a boat trip along the salt marshes of Louisiana. Fish is supposed to be good brain food, but one trip among these people whom the Commission is trying to educate, will convince you that there is a mistake somewhere; and that has always been the difficulty—the matter of education; for where you can not reason, you get no results.

The terns, skimmers and gulls on the outlying islands were constantly robbed of their eggs by the oystermen. But no longer are the birds interfered with, for a few captains, successfully prosecuted, have put a finish to that mode of plundering. These little islands scattered along the coast on both sides of the Mississippi are great out-of-door laboratories, which will prove fruitful in the near future in the study of bird lore. The captain of the "Royal Tern," the special patrol boat of the Audubon Society, reported White Pelicans as breeding on one of the gulf islands. Of course we all know that White Pelicans breed only in the north; but do they? The plumage of young terns is being studied by the State Ornithologist, Stanley Clisby Arthur, and many interesting facts are being compiled; in fact, Louisiana has a wealth of material awaiting to be discovered.

One little island, only a few acres in extent, named Battledore, lies off the coast to the east of the Mississippi and almost in sight of Fort St. Philip. There the sea birds breed yearly and thousands of these graceful feathered folk swarm here and on neighboring islets. I visited this little place during the first week of August, long after the real breeding season, and yet I found young gulls, terns and skimmers of all ages, and even fresh eggs. It is a beautiful sight to see those thousands of flashing wings, and even the shrill and monotonous cries do not take away the effect. The grey immature gulls came out to meet us as the boat approached the island, and escorted us back with many a swoop and circle, coming in close to the boat to dip up a few scraps thrown out by the cook, and then sailing away with scarcely a wing movement. A few terns shrieked their defiance, and as we drew near the shore, we could see the long lines of Black skimmers walking gravely along the shell, and at our too near approach arose as one, and, flying by us, wheeled about with military precision. The skimmers are interesting birds. Their glossy black plumage, the grotesque elongation of the lower mandible, with their resultant mode of skimming the surface for food, and their swift erratic flight, appealed to me more than did the other species, and I enjoyed several hours trying to photograph them.

The skimmers lay three to five whitish eggs, blotched with brownish, in a small depression in the shelly ground. Taken in hand, the egg is conspicuous enough, but on the sand they melt into the background, even as do the little grey youngsters. They are queer fuzzy beasts, and when I came from behind a clump of mangrove onto the shell where the skimmers were raised, they all took to their heels as fast as they could. But even when fluttering as they were, they were nearly invisible, and when too closely pressed, flattened out and would allow themselves to be touched without budging. But all the time I could see those dark brown eyes watching me, just as a cottontail crouching in the long grass will do. And to photograph a nest of these fellows takes more patience than I have. I would get a nestful nicely posed, and

by the time I snapped the picture, one was on each corner of the plate. Then I remember taking one that was just learning to fly. First he squatted down flat in the characteristc skimmer position, and then he bolted pell-mell when I tried to make him pose properly, but perseverance finally won, although he showed his displeasure by shrieking continuously. The young skimmers are of particular interest, because with the very young, both mandibles are of equal length, and I think a good museum group could be made, using a series to show the gradual elongation of the lower. The adults are as interesting as the young, too, and they seemed as much concerned over what I was doing as I was myself. A continual line of them flashed by within a few feet and went skimming across the water, their lower mandible cutting the surface as they searched for food. The sooty black of the plumage makes them very conspicuous as they pass side to, but when they wheel together, as is their custom, they seem to disappear, for the broad strip of white tipping the wings and tail makes them almost invisible against the light of the sky. In flight the skimmers remind me of waves, for they have that gentle wave-like motion in their irregular, undulating flight as they all rise together and swirl away with a flash of white and the rhythmic beat of their wings. One does not notice the combination of color, but notices first the black, and then the white as they turn.

The skimmers did not take all my time, for the beautiful Cabot, Royal and Caspian terns were doing their best to make themselves noticeable. To me, the Royal terns resemble the Tropic-birds of the Pacific, and more than once I thought surely a tern must be one. Bands of young waddled ahead of us and took to the water, and young laughing gulls skulked ahead in the wiry salt grass. These birds objected to being photographed as much as the others, and one young royal tern submitted only after I chased him down the beach. They were grotesque little beggars and never showed a sign of fear, but always sat up and showed defiance when cornered. The adult birds circled around and shrieked their dis-

pleasure, with never ceasing raucous cries, and came in for their share of our attention.

But time flies swiftly and the patrol boats have a long way to go, so all too soon we reëmbarked and were on our way to the next refuge. Battledore was only a dark streak marking the horizon and the broad stretch of silvered sea gradually widened until the little bird refuge slipped from view.

HARRIS HAWKS IN OHIO.

BY THOMAS M. EARL.

On the afternoon of December 29, 1917, I received a parcel by parcels post, the sender being J. H. McKinley, cashier of the Harrisburg Bank of Harrisburg, Ohio. The thriving little country town is located some fourteen miles southwest from Columbus and on the border line of Franklin and Pickaway Counties. It was customary for me to receive parcels from my friend McKinley, as he has a fancy for mounted birds, such as hawks, owls and the like, some of which he displays at his home and some at the bank. The parcel in my hand, therefore, excited no curiosity until I opened it and found before me a fine specimen of Harris hawk (*Parabuteo unicinctus harrisi*). All of the specimens which Mr. McKinley had previously sent me I knew to have been collected in the vicinity of Harrisburg, but here was one, sent to me without comment as others had been, which I knew was far away from its particular avi-Tipperary, and I could not bring myself to think that it had not been shipped in from the Texan border by some soldier friend perhaps of the cashier.

Several weeks elapsed before I saw Mr. McKinley personally, when I obtained from him the following statement, which clears up all doubt as to the locality of the capture:

"The hawk in question was shot by a farmer, living some four miles southwest of Harrisburg, on or about December 24, 1917. On the morning of that day a pair of these hawks were molesting this man's poultry and had killed one or two

of them when they were frightened away. In the afternoon they returned, when the farmer, armed with a shotgun, killed this one, the mate then disappearing. After lying around for several days the hawk was brought to town and given to me. To the farmer it was a chicken hawk, and it was nothing more. I am familiar, as you know, with most of the hawks we have about here, and to me it looked different. So I thought it ought to be preserved. Accordingly I sent it to you. I can vouch for these facts and will furnish affidavits if necessary to satisfy any doubting naturalist."

In my taxidermist's note-book there is the following record of the mounting of this hawk: Note-book No. 3339, A. O. U. No. 335. Common name, Harris Hawk. Scientific name, *Parabuteo unicinctus harrisi*. Sex, male. Collector, J. H. McKinley. Locality, Harrisburg, Ohio. Date, December 24, 1917. Measurements: Length, 20.5 inches; stretch, 41 inches; wing, 12.75 inches; tail, 9.5 inches; tarsus, 3.5 inches. Date of mounting, December 31st, 1917. Remarks: Rare or accidental. Probably first recorded capture of this species in Ohio.

Description. General color, a rusty black; upper and under shoulder coverts and leg feathers, a reddish brown; tail blackish, but base white and broadly tipped with white; upper and under tail coverts white, concealing white base. Size of specimen about that of a red-shouldered hawk.

Range. The range of the Harris hawk is said to be Panama north to southern Texas, rarely southern Mississippi and southern California. It is a remarkable coincidence in name that a *Harris* hawk should have been first taken near *Harris*burg, Ohio.

On February 5, 1918, the specimen was sent gratuitously to Professor Lynds Jones, who has placed it in the museum of Oberlin College.

GENERAL NOTES

THE PINON JAY IN NEBRASKA.

The movements of birds and mammals, not only in migration, but in occupation of new territory, in search of food and suitable breeding grounds, is of immense interest to the student of animal life. I am not able to pay the attention to the subject that it deserves, as my time is largely taken up with plant movements. But I have been much interested in one rather rare bird, now becoming common in Western Nebraska: the Pinon Jay (*Cyanocephalus cyanocephalus* Wied.), an extremely social and fearless creature, with no more consciousness of wrong-doing when he is driving his beak into the skull of a young chicken than the driver of an U boat striking a Lusitania or a hospital ship of the Allies, bearing German wounded.

Following my notes, rather than my memory, I find my first acquaintance with this gentle robber beginning at Holly, Sheridan County, July 15, 1897, as far as Nebraska is concerned. Holly is a post office on the road from Rushville to Pine Ridge Agency, less than half way. I don't recall inquiring whether they nested there, but they undoubtedly did. Pines are abundant, and furnish much food. Thus much for my notes. But I recall that when I visited Newcastle, Wyoming, June, 1896, for ten days and found them common there, they were not new to me, and I have no doubt I made their first acquaintance at Chadron and Crawford in 1889-90. At Newcastle, I found the chicken yards fenced against them on five sides,—every side but the bottom. They could not raise chickens but under cover.

In Long Pine, Brown County, I saw a few, August 9, 1897; also October 2 in the noted canon. October 18, 1900, I estimated a flock at 100. Food of all kinds is abundant there. This is 120 miles east of Holly. April 11, 1911, I found about 40 that were wintering at Gibbon, Buffalo County, on the Union Pacific. They picked up the crumbs every day, in the school yard, after the country children had lunched. By inquiry I learned that about the same number wintered at Norfolk, on the Northwestern, about 100 miles east of Longpine. In 1913, I found them summering in the city park at Valentine, Cherry County, in July and August. This is situated on the Minnechaduza Creek, and is well stocked with pines, cedars, and berries of deciduous shrubs and trees. No one could tell me whether they had nested, but there is no reason to think otherwise. I ought to have consulted the boys for that.

In the winter of 1915 and 1916 I found them at Wood River, two stations west of Grand Island. In October, 1916, I found them at

Bloomington, Franklin County, on the St. Joe and Denver, and November 1, about twenty appeared at Red Cloud, 29 miles east. This was their eastern advance line. They fed heavily on the fruit of the box elders and a few planted red cedars. During the winter they were observed over most of the town, and many inquiries were made of me, so that I found it desirable to put a note in one of the papers. They were last seen May 21, 1917, and I noted their departure for the wild west with feelings not unmixed with pleasure. (Valentine is the most eastern point for their summering, so far reported.)

J. M. BATES.

Red Cloud, Nebraska.

SOME BIRD NOTES FROM NEBRASKA.

In the fall of 1916 a Woodcock lingered in one of the smallest parks in the heart of the residence district of Omaha from August 10 to September 24, thanks to the underbrush which had been left undisturbed in this park.

A flock of four Pine Grosbeaks was noted twice in March, 1917, first on the fourth, and again on the eighteenth, in one of the parks which has been the scene of my regular observations. There can be no error in my identification of these birds as they were observed at very close range, in fact their tameness made the cautiousness of my first approach towards them seem almost ludicrous.

The following observations have been made during the fall and winter of 1917-18 in two parks and a strip of wild growth connecting them on the outskirts of Omaha. This area is broken by hollows and ravines, which afford good winter shelter for the birds, and has groves of oaks and pines.

First dates in the fall of 1917: October 7, Myrtle Warbler, White-throated Sparrow; 14, Brown Creeper, Slate-colored Junco, Tree Sparrow and Harris Sparrow; 21, Fox Sparrow.

Last dates in the fall of 1917: September 2, Wood Pewee; 9, Baltimore Oriole; 15, Oven-bird; 16, Redstart and Bell Vireo; 23, Rose-breasted Grosbeak, Brown Thrasher; 30, Wood Thrush, Catbird; October 2, Chimney Swift, Barn Swallow; 14, Robin; 21, Myrtle Warbler; 28, Fox Sparrow, Towhee; November 4, Bluebird, Western House Wren, Song Sparrow; December 21, Harris Sparrow.

The Red-headed Woodpecker has remained up to January 27, in spite of the severe cold. Individual Flickers have been noted during the winter, and on Christmas day I saw a flock of five of them. A covey of 12 or more Bob-whites seems to have successfully wintered and escaped destruction by hunters. About a dozen Blue

Jays wintered up to January 26, but disappeared with the heavy fall of snow. On February 10 they reappeared, and with them the first Robin. I have noted no Crossbills, Redpolls, Pine Siskins or Red-breasted Nuthatches this winter, while last winter Redpolls were very numerous and Red-breasted Nuthatches were regularly noted.

I also wish to record the nesting of the Arkansas Kingbird and Burrowing Owl on a farm near Wilber, Nebraska, during the summers of 1916 and 1917.

L. O. Horsky.

Omaha, Nebraska.

NOTES ON OHIO BIRDS.

The following records and observations of the last few years seem worthy of publication:

1. *Larus argentatus.*

A large specimen over the parsonage on February 22, 1917. Very early date.

2. *Chen cærulescens.*

A fine speciment of this species was wing-tipped about two miles northeast of New Bremen on January 17, 1916, and brought in alive to one of our veterinary surgeons, who has been keeping it ever since on his premises.

3. *Catoptrophorus semipalmatus inornatus.*

This species was observed for a long time on August 30, 1915, in Shelby County, Ohio, three miles east of New Bremen. It stayed at a small pool of water in a meadow. Not only was it closely observed, but its call was noted during its flight several times.

4. *Astur atricapillus.*

A fine ♀ of this very rare hawk, as far as Ohio is concerned, was taken on November 8, 1917, at exactly the same place where the Blue Goose was shot in 1916. It is perhaps well to give a summary of the published records of the taking of this hawk in Ohio. Dr. Wheaton in 1880 mentions but two specimens taken in the state, the first one of these records being rather hazy, the second one only being indisputable, a single immature female, taken twenty miles east of Cincinnati, in November, 1878. It is not stated whether this bird was preserved or not. It is given on the authority of Mr. Dury. Dr. Wheaton never met with it near Columbus. Dawson (Birds of Ohio, page 402) states that but one was shot at the O. S. U. grounds at Columbus on March 13, 1901, but that it could not be preserved. Lynds Jones, in Wilson Bulletin, December, 1909, page 192, states for the Cedar Point-Oberlin region that he has never seen one there, but that there is one in the Oberlin Mu-

seum collection which was collected near Oberlin. Thus my specimen (No. 1725 coll. W. F. H.), a fully adult ♀, seems to be the fourth specimen of this species actually taken, and possibly only the second one that has been preserved in the state.

5. *Buteo platypterus.*

Former Ohio ornithologists considered this hawk rare in the state, but Professor Jones was always of the same opinion as the writer, that it has merely escaped the notice of the birdmen, and recent records have confirmed the truth of this opinion. On April 21, 1916, I received a fine ♂ of this species, shot near New Bremen; on September 22, 1916, I shot one, a ♀, in thick woods in Shelby County, Ohio, five miles east of New Bremen, whose stomach contained four large grasshoppers and two caterpillars of *Hyloicus chersis*, while its craw was stuffed with one large caterpillar and a frog. On April 25, 1917, I received a pair, shot near New Bremen, on April 26 two ♀♀, and on April 28, 1917 another ♀. All told, seven specimens taken in a year show that this hawk is certainly not rare, at least during migrations. These specimens are now all in my collection.

6. *Accipiter velox.*

On November 13, 1916, a ♂ of this species was brought to me alive. It had been stunned trying to grab a full-grown chicken through a woven wire fence. It certainly was driven to this act by hunger, as I never saw a more emaciated specimen of hawk.

7. *Loxia curvirostra minor.*

A ♂ of this species was caught alive at New Knoxville, Auglaize County, five miles northeast of New Bremen, on January 6, 1917, but it was in too bad shape when I received it to be preserved. This is the first time since 1892 that this bird showed up in this vicinity.

8. *Calcarius lapponicus.*

On February 7 and 8, 1917, I saw a flock of ten to twenty of these birds at two cemeteries, at both of which I had to conduct funerals on these days. The one day a wild snowstorm raged, and on the next one it was still very cold. This is my second record only in ten years for this region.

9. *Dendroica æstiva.*

On May 4, 1917, a ♂ of this species was brought to me, which had been found dead on this day in Shelby County two miles east of New Bremen. It had an aluminum ring around its tarsus with the number 9708. Perhaps some one can tell me where this bird had first been tagged. It is now in my collection.

10. *Dendroica tigrina.*

In southern Ohio I always looked for this bird along the river

banks among the sycamores and elms in the spring as well as in the fall, and in the latter season found it common in upland as in the fall, and in the latter season found it common in upland beechwoods; in northern Ohio I looked for it mainly in the orchard trees. This year, on May 25, 1917, we entered a large patch of woods about a half mile from the Grand Reservoir early in the morning, just when the fog had barely raised above the treetops, and the warblers were fairly swarming there, among them numbers of Cape May's. I counted more than fifty, but got tired counting and then gave it up, after taking a fine pair. This fall, however, they were swarming in the fruit trees of the village, something I had never experienced in the fall migration. A ♀ was taken September 18, 1917, by Rev. von Ragüe.

11. *Dendroica castanea.*

This warbler is generally rather rare in the spring and fine old birds are met with, mostly singly, in this neighborhood, but this year, at the same place where we observed the Cape May's, we found it very common in pairs, one of which was taken on May 25, 1917. It was not as common, however, as the Cape May Warblers.

12. *Vermivora rubricapilla.*

This species was also more common on this date, May 25, 1917, than I had ever seen it before in this region. The same remark also applies to the Parula Warbler, the Yellow-breasted Chat, the Catbird, which has increased considerably here, the Whippoorwill and the Orchard Oriole, of which latter species I found a nest with young on June 29 on a cemetery two miles northeast of New Bremen.

13. *Wilsonia pusilla.*

A fine ♂ of this comparatively rare warbler was taken in an apple tree in the village on September 18, 1917, by Rev. H. S. von Ragüe.

14. *Oporornis formosus.*

On May 18, 1916, I ran across a fine ♂ of this warbler in a woods a mile out of town. Although I did not succeed in securing it, I am well acquainted with this species from my former residence in southern Ohio and Missouri, hence could not be mistaken in the bird nor its notes. Its occurrence here I regard as purely accidental. In the same woods I had formerly observed the Connecticut Warbler.

15. *Anthus rubescens.*

On January 8, 1917, I observed for a long while a flock of thirty to forty of these birds in Mercer County, about six miles northwest of New Bremen. It does not seem to occur in this region very often.

W. F. Henninger.

New Bremen, Ohio.

MEMBERSHIP ROLL OF THE WILSON ORNITHOLOGICAL CLUB

(It has been found impracticable to publish at this time the membership by groups. Hence the form of the roll as given. The next list will appear with the names arranged according as the member is Sustaining, Active or Associate.)

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TWO NESTS OF BLACK-CHINNED HUMMINGBIRD

THE
WILSON BULLETIN
NO. 103
A QUARTERLY JOURNAL OF ORNITHOLOGY
VOL. XXX JUNE, 1918 NO. 2
OLD SERIES VOL. XXX. NEW SERIES VOL. XXV.

A HUMMING BIRD'S FAVORITE NESTING PLACE.

F. N. SHANKLAND, WILLOUGHBY, OHIO.

It is a fact well known to all students of birds that many species of hawks, eagles, owls, swallows, wrens and other birds, return to the same nesting place year after year. It is doubtful, however, whether this has ever been found to be true of humming birds. In two cases that have come to my attention, however, humming birds of two different species have returned to the same nesting haunt on successive summers.

The accompanying photo shows two nests of the Black-chinned Hummingbird of California. The upper nest was built one year later than the lower one and contained two eggs at the time it was found. The birds had been seen in the locality the previous summer, but the nest had not been located. A year later, however, their secret was discovered and the nest and eggs collected. There is little doubt but that both nests were made by the same pair of birds. Evidently they liked the nesting place so well that they returned to it the second year. Nor is it improbable that if the nest had been left undisturbed the proprietors might have added a third nest the following year, and even more after that.

The nests shown in the photo were found by J. B. Dixon in Escondido, San Diego County, California, on June 12, 1904. They were located thirty feet high in a live oak tree.

The nests were made of sycamore down without lining. One of the eggs is somewhat larger than the other, which is often the case with sets of humming birds' eggs, and is usually explained on the theory that the smaller egg will hatch into a male bird and the larger one into a female.

Sometime ago I had the good fortune to find a nest of the Ruby-throated Hummingbird on an apple tree branch near my home at Willoughby. The nest contained two fresh eggs. While looking around I noticed a second nest a few feet away, and upon examining it found that it was a last year's one. Both nests had probably been made by the same pair of birds, for aside from the discoloration and weathering of the old nest, the two were identical in size, shape and general appearance. This, coupled with the fact that they were located within a few feet of each other, makes it almost certain that they were built by the same pair of birds.

These are interesting examples of the wonderful instinct which guides even the tiniest of birds over thousands of miles of territory to their favorite summer nesting haunts. In the case of the Black-chinned Hummingbird, however, it is quite possible that the builders of the double nest, owing to the mild climate of Southern California, had never strayed very far away from the place it was found.

A SECOND BIRD SURVEY AT WASHINGTON, D. C.

BY HARRY C. OBERHOLSER.

Our first comprehensive bird census[1] near Washington, D. C., was such a success that we decided to repeat it in the spring of 1917. On this second occasion twenty-two ornithologists took part, and the seventeen parties into which they separated covered pretty thoroughly the various kinds of country within twenty miles of the city. The date selected was May 11, 1917, one day earlier in the month than in 1913; and the choice proved to be a fortunate one, since an unex-

[1] The Wilson Bulletin, XXIX (No. 98), March, 1917, pp. 18-29.

pected and extraordinary combination of circumstances made this time exceptionally favorable for birds.

Weather conditions on this day were almost ideal. The air was clear, with 90 per cent of possible sunshine; a relative humidity of 62 at 8 a. m., and of 31 at 8 p. m.; a barometer ranging from 29.85 at 8 a. m. to 29.69 at 8 p. m.; and with a light south breeze in the morning, changing to a rather strong northwest wind in the evening. The temperature also was favorable, being moderately cool and equable, ranging from a minimum of 42° at 5 a. m. to a maximum of 68° at 4 p. m. Thermometer readings at other hours of the day were as follows: 4 a. m., 44°; 7 a. m., 46°; noon, 64°; 2 p. m., 66°; 6 p. m., 65°; 9 p. m., 57°.

The results of this all-day trip were as remarkable as they were unexpected, for on the previous day the prospects were far from bright. The total number of species observed by all the parties collectively was 166, which is, so far as we are aware, the largest number ever reported in a single day at any locality in the United States, even by the combined efforts of several observers. The total number of individual birds noted was 17074. The reasons for this rather astonishing result are not far to seek. The very cool weather of April and early May induced the winter residents to remain late, and at the same time greatly retarded the northward movement of the later migrants; a condition which, to judge by the reports of heavy spring migration from many other localities, obtained over much of the northern and middle portion of the eastern United States. An examination of the appended table will show that, while a large number of species was present, there were only a few individuals of many of the later migrants on this May 11, on which date the spring migration about Washington is ordinarily at its height. In 1917, however, the high tide of the migration was not reached until May 17 to 23, nearly ten days later than usual. On the other hand, in 1917, some of the early migrants and winter residents were very numerous for so late in the season; as, for instance, the red-breasted nuthatch, blue-headed vireo, and

SPECIES	Wetmore	Aspinwall and Pellew	Shoemaker	Mabbott	Jackson	Palmer	Harper	Miner	Kalmbach and Gabrielson	Oberholser	Bartsch	Howell	Williams and Henderson	Cooke and Baird	Stimson	Holt	Mrs. Gabrielson	Totals
Phalacrocorax auritus auritus						2	1		1									4
Nycticorax nycticorax naevius	3				1		5			2					1			12
Butorides virescens virescens	1			2	1	1	5	1	3	6							1	21
Ardea herodias herodias							1		1									2
Ixobrychus exilis							6		3									9
Marila affinis						1	54	3	2									60
Marila marila										1								1
Anas platyrhyncha							4		1	2				3				10
Anas rubripes tristis	2						6			6								14
Querquedula discors										1								1
Aix sponsa																1		1
Lophodytes cucullatus							3											3
Cathartes aura septentrionalis	14	42	39	18	33	17	20	12	46	43	1	23	12	17	24	15	2	378
Tinnunculus columbarius columbarius										1								1
Cerchneis sparveria sparveria	1			1								2						4
Pandion haliaetus carolinensis			2	1		1			4	2		1						11
Haliaeetus leucocephalus leucocephalus							1	1										2
Buteo lineatus lineatus	1					1		1	1	2	1		3				1	11
Buteo platypterus platypterus	2		1					1		3		1		2				10
Accipiter cooperii	1					1			1				1					4
Accipiter velox									1					3		1		5
Circus cyaneus hudsonius													1					1
Bonasa umbellus umbellus			1															1
Colinus virginianus virginianus	8	3	6	2	3	4	24	10	18	12	2	4	7	15	10	8	3	139

Rallus elegans						1												1
Glottis melanoleuca							16			10								26
Iliornis flavipes						7			2	145								154
Tringa solitaria solitaria	1				2	1	3	1	4			4	5			2		23
Bartramia longicauda								1										1
Actitis macularia	10	3	35	11	26	26	35	15	40	63		8	4	3	3	11		293
Pelidna alpina pacifica										30								30
Ereunetes pusillus						7			1	24								32
Pisobia fuscicollis						3			1									4
Pisobia minutilla minutilla									1	5								6
Philohela minor										1								1
Gallinago delicata									3									3
Oxyechus vociferus vociferus		1	3		1	1	3	1	5	3		1			1	4		24
Larus argentatus									1									1
Larus delawarensis									10									10
Larus atricilla megalopterus						2		6										8
Larus philadelphia							4	4	160		30							198
Chlidonias nigra surinamensis						6	4		1									11
Hydroprogne caspia imperator							4		4									8
Sterna hirundo						2												2
Zenaidura macroura carolinensis	11	9	10	7	2	2	8	11	16	10		27	7	5		21	4	150
Coccyzus americanus americanus	1																	1
Coccyzus erythropthalmus							1	1		1		1						4
Colaptes auratus luteus	6	13	7	8	7	10	7	14	8	14	4	7	14	9	6	14	1	149
Centurus carolinus	1			1	1			2								2		7
Melanerpes erythrocephalus	1	2		1	1	2	4	2	3	11		9	2	3	3	5	1	50
Dryobates pubescens medianus	2			5	1	2	4	8	2	1	2	1	5	4	1	3		41
Dryobates villosus villosus		1					5	2		1		2			1	2		14
Sphyrapicus varius varius								1										1
Streptoceryle alcyon alcyon	1	2		3	2	3	3	5	5	7		3	3	2		2		41
Strix varia varia						1				1								2
Otus asio naevius					1				1									2
Setochaleis vocifera vocifera		1															1	2
Chordeiles minor minor	2		2				1		1	3						1		10
Archilochus colubris				1		1		1	2									5
Chaetura pelagica	90	350	26	160	59	202	66	100	70	81		40	16	80	3	130	21	1475

Horizopus virens				1	3	1		1		1		1						8
Empidonax virescens		1			2									3				6
Empidonax traillii traillii														2				2
Empidonax minimus	1			1	2		1		1	1			1	1				9
Sayornis phoebe	3	9	7	9	12	1	4	12	1	1		7	8	13	7	5		99
Myiarchus crinitus crinitus	6	7	5	4	2	3	4	4	5	8	1	6	8	7	2	4	1	77
Tyrannus tyrannus tyrannus	3	5	7	2	1	1	4	18	6	2	1	4	1	9	7	6	2	79
Sturnus vulgaris	1			1					3									5
Toxostoma rufum rufum	3	10	7	1	4	11	3	12	6	6	1	18	9	2	8	4	4	109
Mimus polyglottos polyglottos		10	1	2	3	1	2	16	4	24		3			3	2		71
Lucar carolinensis	5	36	1	42	96	38	37		54	35		15	40	14	23	29	6	471
Sialia sialis sialis	2	18	12	2	6	2	6	14	9	5		6	2	3	3	6	1	97
Planesticus migratorius achrusterus	10	68	11	10	18	8	26	11	33	47		50	50	30	34	46	2	454
Hylocichla fuscescens fuscescens	3	8		2	1			3	1	1		1	2	1		1		25
Hylocichla guttata pallasii							2					1				1		3
Hylocichla aliciae aliciae		4								2				1				7
Hylocichla ustulata swainsoni	3				3					2		1		1				10
Hylocichla mustelina	6	21	6	20	10	6	5	1	8	51		23	30	10	2	6		205
Polioptila caerulea caerulea	3	6	2	5	1		3	2	8	9				1		2		42
Regulus calendula calendula	1		2				1		2				1		3		2	12
Troglodytes aedon aedon	4	30	8	5	20	24	15	25	32	10		15	13	10	11	17	1	240
Thryothorus ludovicianus ludovicianus	10	11	3	38	9	7	8	4	20	4		5	4	17	6	6	2	154
Telmatodytes palustris palustris							7		5	22								34
Sitta canadensis	4	1	1	1			1	1						1			2	12
Sitta carolinensis cookei			1		1			4	1	2		1	4	1	1		1	17
Penthestes carolinensis carolinensis	2	5	4		4	1	2	5	4	7		1	5	5	2	5	2	54
Baeolophus bicolor	5	14	4	11	9	1	2	23	3	15		10	7	9	3	8	2	126
Cyanocitta cristata cristata	20	23	23	7	14	15	7	35	11	61		25	17	73	3	31	14	379
Corvus ossifragus	2	13		1	5	8	15	50	19	34	7	5		7				166
Corvus brachyrhynchos paulus	9	38	16	14	22	25	26	11	38	52	2	29	8	26	6	21	4	347
Lanius ludovicianus migrans		1						1		1	2	2						7
Vireo griseus griseus	4	8		8	4	12	13	15	24	12	1	5	5		4	5		120
Lanivireo solitarius solitarius	2	2	2	1				4		2		1		5	1			20
Lanivireo flavifrons	1	5	7	12	2	1	2		6	6		4	1	1	2	5		55
Vireosylva gilva gilva					1				1									2
Vireosylva olivacea	2	10	6	14	27		2	6	1	1		2	2	1	1	1		76

Bombycilla cedrorum														1		6		7
Iridoprocne bicolor	12		6		2	5	20	12	18	24	40				2	10		151
Hirundo rustica erythrogastris	9	6	6	6	2	4	17	50	12	50	20	14			9	36		241
Riparia riparia riparia	2					114	6		2	3	100							227
Stelgidopteryx serripennis serripennis	8	24	16	10	193	120		20	5	40	3	1		22		2		464
Petrochelidon albifrons albifrons	1			2	2		1	5			20							31
Progne subis subis	21	2		2			3	15	8	18								69
Setophaga ruticilla	6	33	17	53	84	12	22	35	37	22		5	3	16	13	10	1	369
Wilsonia canadensis		3	1	1			1							2				8
Wilsonia pusilla pusilla		1				1			1									3
Wilsonia citrina	6	6	9		1	1	1	2		2		4	1	2				35
Icteria virens virens	5	8	2	10	6	1	11	5	23	1		4	5	3	4	2		90
Geothlypis trichas trichas	6	25	9	20	13	19	30	35	36	25		20	12	6	10	14	4	284
Geothlypis trichas brachidactyla														1				1
Seiurus noveboracensis noveboracensis		1	1	7	1	1	2			2		3	8			5		31
Seiurus motacilla	4	1	5	2	11	1	1		1				2	9	3			40
Seiurus aurocapillus	3	34	11	12	13	3	9	14	13	41		22	30	31	5	4	1	246
Oporornis philadelphia					3													3
Oporornis formosus	2	2		2				1						3				10
Dendroica palmarum hypochrysea									1									1
Dendroica discolor	13	8	8	3	2	1	4	3		2		2	3	1				50
Dendroica vigorsii vigorsii	1	1			1							1						4
Dendroica striata								5										5
Dendroica pensylvanica	8	6	1	4		2	5	12	5	6		8	4	27	3	3	1	95
Dendroica fusca				1	3					1				3		1		9
Dendroica virens	15	25	30	6	1	5	4	8	12	16		1	15	13	5	4		160
Dendroica coronata coronata	57	14	10	14	3	4	9	32		16	1	19	75	28	11	15	8	316
Dendroica caerulescens caerulescens	1	11	3	9	5	1		12	3	2		1	2	7	1		1	59
Dendroica tigrina					1		1			2								4
Dendroica magnolia	1	2			2	1	1			1		1	3	2	1		1	16
Dendroica aestiva aestiva	3	8	2	6	6	6	14	10	30	19		2	2	3	3	8		122
Compsothlypis americana americana	4	21	21	20	8	2	3	8		8		1	4	7	2			109
Vermivora ruficapilla ruficapilla					1					14						1		16
Vermivora peregrina								1		2								3
Vermivora pinus		1							2	1								4
Vermivora chrysoptera		1			1	1								2		1		6
Protonotaria citrea																	1	1

Helmitherus vermivorus		3	12		4	1	1		1	1								22
Mniotilta varia	5	13	11	13	4	1	5	22	2	12		10	12	22	6	8		146
Dolichonyx oryzivorus			9				35	50	41	18		10				23		86
Sturnella magna magna	5	44	20	8	2	1	24	25	20	8	1	16	1	11	8	15	1	210
Agelaius phoeniceus predatorius			1		3	1	8	1	26	104	1	4			3	16		168
Icterus galbula	3	19		5	2		2			3	1		5	2	3	1		46
Icterus spurius	1	14	2			3		6		4		2			1			33
Euphagus carolinus															5	20		25
Quiscalus quiscula quiscula	4	41	3	21	8	5	47	150	57	56	1	43	16	29	21	25	3	531
Molothrus ater ater						7		1		1					1			10
Piranga erythromelas	4	8	1		2		1	4	5		1	2	3	1	1	1	3	37
Piranga rubra rubra							1					2						3
Cardinalis cardinalis cardinalis	18	28	10	17	15	13	14	18	42	27	4	18	25	8	9	11	5	282
Hedymeles ludovicianus		1	1		1			2	2	1								8
Guiraca caerulea caerulea					1													1
Linaria cyanea	2	14	1	16	2	2	1	21	2	1		1	2	1	1	5		72
Pipilo erythrophthalmus erythrophthalmus	13	18	13	6	17	16	15	25	27	37	1	16	30	11	8	15	10	278
Passerella iliaca iliaca		1																1
Melospiza georgiana	6	2	1	1	2		16	1	12			2				3		46
Melospiza melodia melodia	4	13	6	18	126	79	39	75	46	80	12	32	20	8	10	16	2	586
Zonotrichia albicollis	109	148	57	52	63	58	64	100	57	81	6	44	300	74	14	27	21	1275
Zonotrichia leucophrys		1					5		1	1		1		2	2	1		14
Spizella pusilla pusilla	4	27	15	4	2	18	17	31	20	4		14	2	3	2	3	2	168
Spizella passerina passerina	10	101	48	5	6	20	6	50	33	39		36	6	44	5	25	3	437
Spizella monticola monticola															1			1
Nemospiza henslowii henslowii							3											3
Ammodramus savannarum australis		2	7				15	12	4					•	1			41
Passerculus sandwichensis savanna																1		1
Pooecetes gramineus gramineus			3							2						1		6
Passer domesticus hostilis	25	116	27	30	453	101	106	15	69	52		14		45	26	70		1149
Carpodacus purpureus purpureus	17	38	25	21		1	14	50		44	30	1	25	12	10	57		345
Astragalinus tristis tristis	11	15	35	37	16	26	89	100	53	30	41	19	23	14	6	36	5	556
Spinus pinus pinus	2						1											3
Total number of species	85	84	73	74	85	83	97	89	98	105	30	79	63	76	67	74	43	166
Total number of individuals	702	1705	734	879	1517	1131	1189	1526	1458	1840	338	771	937	876	401	934	136	17074

purple finch. Furthermore, the occurrence of an exceptional number of rare and of occasional visitors at the time our census was taken aided materially in swelling the total of species observed. This peculiar combination of circumstances, which made possible such a great record, is not likely to recur in many years.

On this day the seven most numerous species, in the order of their abundance, were: chimney swift, white-throated sparrow, English sparrow, song sparrow, American goldfinch, purple grackle, and catbird. It is interesting to note that four of these are sparrows.

The nineteen species least numerous, of which only a single individual was observed, were: greater scaup duck, blue-winged teal, wood duck, pigeon hawk, marsh hawk, ruffed grouse, king rail, upland plover, woodcock, herring gull, yellow-billed cuckoo, yellow-bellied sapsucker, northern yellow-throat, yellow palm warbler, prothonotary warbler, blue grosbeak, fox sparrow, tree sparrow, and Savannah sparrow.

The fourteen species of most general distribution, reported by all the parties in the field, were: turkey vulture, bob-white, flicker, crested flycatcher, kingbird, brown thrasher, southern crow, meadowlark, purple grackle, cardinal, chewink, song sparrow, white-throated sparrow, and American goldfinch.

Thirteen others were observed by every party except one: chimney swift, bluebird, southern robin, house wren, Carolina wren, tufted titmouse, blue jay, American redstart, Maryland yellow-throat, oven-bird, myrtle warbler, field sparrow, and chipping sparrow.

Several birds were much more than ordinarily numerous for this locality, among which we might mention the white-crowned sparrow, bob-white, mockingbird, Carolina wren, blue jay, and American redstart.

Among the rarer birds of the District of Columbia, found on May 11, the following seem worthy of special mention: the double-crested cormorant, of which there are only a few other records; the woodcock, which has become rare of late years; the pigeon hawk, which is not often seen; the ruffed

grouse, which has become almost extinct in the immediate vicinity of Washington; the king rail, which is here of very local distribution; the upland plover, which has been very rare of recent years, but is now apparently on the increase; the red-backed sandpiper, which is very irregular here; the white-rumped sandpiper, which has but two other records; the laughing gull, with only a few previous occurrences, and none of these in the spring; the black tern, previously noted only once in spring; the Caspian tern, otherwise but twice recorded; the common tern, with also but two definite previous records; the mourning warbler, which has been very infrequent of late years; the blue-winged warbler, which is also rare; the prothonotary warbler, of which there are but seven previous records; and the blue grosbeak, which is so uncommon that its presence is always noteworthy.

So unusual a spring season might reasonably be expected to furnish a number of very late records for migrants and winter residents; and in the following list are included those of which the late spring records were broken by our observations on May 11; their latest previous known occurrence at this season in this locality being represented by the date after each:

Mallard, March 19, 1905.
Black duck, April 21, 1915.
Hooded merganser, April 8, 1906.
Pigeon hawk, April 25, 1912.
Upland plover, April 24, 1890.
Red-backed sandpiper, April 24, ——.
White-rumped sandpiper, no previous spring record.
Herring gull, May 10, 1887.
Ring-billed gull, April 28, 1887.
Laughing gull, no previous spring record.
Caspian tern, no previous spring record.
Common tern, May 7, 1894.
Rusty grackle, April 30, 1875.
Tree sparrow, May 7, 1889.

Comparison of the present census with that of 1913 brings out some interesting points. While the weather on the two

census days was very similar, the temperature on the immediately preceding days was widely different in the two years, being very high in 1913, and very low in 1917; so that in 1913 the winter residents had practically all disappeared, and the number of purely migratory species present was also very much less than in 1917. Thus, 1913 was an exceptionally poor year for birds, in fact, considerably below normal; and 1917 was fully as much above the ordinary. The difference between 129 species observed in 1913, and 166 in 1917 well illustrates this; and the normal condition would probably be about half-way between the two. Six species, however,—the pied-billed grebe, great horned owl, bay-breasted warbler, yellow-throated warbler, northern parula warbler and Bachman sparrow—seen in 1913 were not noted in 1917. Of the six most numerous species, in point of individuals observed, only three—the English sparrow, song sparrow, and chimney swift—were identical in the two years, and their relative abundance was not the same. The abundance of the barn swallow and tree swallow in 1913 was due to a large single flock of swallows seen on the Anacostia River; but no such flock was present on the day of our observations in 1917. Moreover, the list of birds least numerous was very different in 1917, as only five out of nineteen are common to both lists. These are the marsh hawk, king rail, woodcock, yellow palm warbler, and blue grosbeak. The species of most general distribution, however, show a much closer agreement, since eight out of fourteen of the 1917 birds in this category are the same as those in the 1913 list.

The itinerary of each of the seventeen parties engaged in this survey was as follows:

1.—Great Falls, Virginia. Traveled by electric car from Woodridge, D. C., to Fairview, Virginia, and return, 43 miles; on foot, 18 miles, from Fairview, Virginia, to above Great Falls on the Virginia side of the Potomac River. Character of country traversed: woodland and thickets, 80 per cent; clearings and farm land, 17 per cent; swamp, 3 per cent. Total distance traveled, 61 miles. Time in field, 5:00 a. m. to

9:25 p. m. Total number of species observed, 85; individuals, 702. Alexander Wetmore.

2.—Washington, D. C., to Great Falls, Maryland. Traveled by automobile to Great Falls and return, 40 miles; on foot, 10 miles, about Great Falls, on the Maryland side. Character of country traversed: woodland and thickets, 80 per cent; fields, 20 per cent. Total distance traveled, 50 miles. Time in field, 6:00 a. m. to 5:30 p. m. Total number of species observed, 84; individuals, 1705. Mrs. Clarence A. Aspinwall and Miss Marion Pellew.

3.—Valley of the Potomac River in Virginia, from Difficult Run to Dead Run, and west to McLean, Virginia. Traveled by electric car from Washington, D. C., to Bellevue, Virginia, and from McLean, Virginia, to Washington, D. C., 18 miles; on foot, 8 miles, from Difficult Run along the Potomac to Dead Run, and thence across country to McLean, Virginia. Character of country traversed: woodland and thickets, mostly along streams, 65 per cent; open fields and country roads, 35 per cent. Total distance traveled, 26 miles. Time in field, 6:30 a. m. to 6:00 p. m. Total number of species observed, 73; individuals, 734. Clarence R. Shoemaker.

4.—Valley of the Potomac River in Maryland, from Chain Bridge, D. C., to one mile above Great Falls, Maryland. Traveled by electric car from Woodridge, D. C., to Chain Bridge, D. C., and from Great Falls, Maryland, to Woodridge, D. C., 30 miles; on foot, 14 miles, along the Chesapeake and Ohio Canal from Chain Bridge to one mile above Great Falls, Maryland, with detours to the Potomac River, to Plummer's Island, and elsewhere. Character of country traversed; canal and towpath, 60 per cent; woodland and thickets, 40 per cent. Total distance traveled, 44 miles. Time in field, 5:10 a. m. to 6:45 p. m. Total number of species observed, 74; individuals, 879. Douglas C. Mabbott.

5.—Potomac Valley on the Virginia side from Georgetown, D. C., to Chain Bridge, Virginia; and on the Maryland side from Chain Bridge, D. C., to Cabin John Bridge, Maryland. Traveled by electric car from Washington, D. C., to George-

town, D. C., and from Cabin John Bridge, Maryland, to Washington, D. C., 14 miles; on foot, 17 miles, from Georgetown, D. C., along the Virginia side of the Potomac to Chain Bridge, Virginia; and on the opposite side of the Potomac from Chain Bridge, D. C., to Cabin John Bridge, Maryland. Character of country traversed: dry woodland, 30 per cent; wet woodland, 20 per cent; forest borders, 36 per cent; fields and roads, 5 per cent; rocky ledges and brushland, 8 per cent; marshland, 1 per cent. Total distance traveled, 31 miles. Time in field, 3:50 a. m. to 3:00 p. m. Total number of species observed, 85; individuals, 1517. H. H. T. Jackson.

6.—Rosslyn, Virginia, to Arlington and Four-mile Run, Virginia. Traveled by automobile from Georgetown, D. C., to Four-mile Run and return, 10 miles; on foot, 8 miles, from Rosslyn, Virginia, to Arlington Cemetery, Hume Station, Relee, and Four-mile Run, Virginia. Character of country traversed: riverside, marshes, and thickets, 40 per cent; woodland, 10 per cent; open fields and roads, 50 per cent. Total distance traveled, 18 miles. Time in field, 7:00 a. m. to 5:30 p. m. Total number of species observed, 83; individuals, 1131. William Palmer.

7.—Woodridge, D. C., Washington, D. C., and New Alexandria to Dyke and Falls Church, Virginia. Traveled by electric car from Woodridge, D. C., to New Alexandria, Virginia, and from Falls Church, Virginia, to Woodridge, D. C., 27 miles; on foot, 25 miles, about Woodridge; in the Mall of the city of Washington; from New Alexandria, Virginia, to Dyke, Virginia, and thence across country to Falls Church, Virginia, by way of Cameron Run and Holmes Run. Character of country traversed: woodland, 50 per cent; fields, 35 per cent; marsh, 10 per cent; river, 5 per cent. Total distance traveled, 52 miles. Time in field, 4:05 a. m. to 9:35 p. m. Total number of species observed, 97; individuals, 1189. Francis Harper.

8.—Wellington, Virginia, to Dyke and Oaks, Virginia. Traveled by electric car from Wellington, Virginia, to Washington, D. C., 13 miles; on foot, 9½ miles, from Wellington,

Virginia, to the Fort Hunt Road; to Arcturus; along the river to Dyke and Oaks; and thence along the uplands back to Wellington, Virginia. Character of country traversed: woodland, 20 per cent; marsh, 10 per cent; farmyards, 1 per cent; orchards, 2 per cent; fields, 67 per cent. Total distance traveled, 22½ miles. Time in field, 5:00 a. m. to 5:00 p. m. Total number of species observed, 89; individuals, 1526. Mr. and Mrs. Leo D. Miner.

9.—Valley of the Potomac and Anacostia Rivers, from opposite Alexandria, Virginia, to Benning, D. C., and College Park, Maryland. Traveled by electric car from Congress Heights, D. C., to Anacostia, D. C., and from Riverdale, Maryland, to Woodridge, D. C., 4 miles; on foot, 18 miles, in the vicinity of the Potomac River from opposite Alexandria to Congress Heights; along the Anacostia River from Anacostia to Woodridge, D. C.; across country to College Park, Maryland; and thence to Riverdale, Maryland. Character of country traversed: woodland, 40 per cent; meadows, 4 per cent; roadways, 22 per cent; wooded swamps, 17 per cent; mud flats, 11 per cent; river shore, 3 per cent; and marshes, 3 per cent. Total distance traveled, 22 miles. Time in field, 4:00 a. m. to 7:00 p. m. Total number of species observed, 98; individuals, 1458. E. R. Kalmbach and I. N. Gabrielson.

10.—Rock Creek Park, D. C., Piney Branch, D. C., and the Anacostia River Valley from Benning, D. C., to Bladensburg, Maryland. Traveled by electric car from Rock Creek Park to Benning, D. C., and return, 12 miles; on foot, 1 miles, in Rock Creek Park, along Piney Branch, and in the Anacostia Valley; by rowboat, 12 miles, from Benning, D. C., to Bladensburg, Maryland, and return. Character of country traversed: woodland and thickets, 42 per cent; fields and roads, 16 per cent; marsh, 21 per cent; and river, 21 per cent. Total distance traveled, 31 miles. Time in field, 4:00 a. m. to 9:00 p. m. Total number of species observed, 105; individuals, 1840. Harry C. Oberholser.

11.—Oxon Run, D. C., and Potomac Park, Washington.

D. C. Traveled by automobile, Washington, D. C., to Oxon Run, D. C., and return; and to Potomac Park and return, 18 miles. Character of country traversed: woodland and thickets, 60 per cent; meadows, fields, and park, 40 per cent. Total distance traveled, 18 miles. Time in field, 6:30 a. m. to 8:30 a. m.; and 5:00 p. m. to 6:00 p. m. Total number of species observed, 30; individuals, 338. Paul Bartsch.

12.—Woodridge, D. C., to Forest Glen, Maryland. Traveled by electric car from Forest Glen, Maryland, to Woodridge, D. C., 13 miles; on foot, 15 miles, from Woodridge, D. C., to Mount Rainier, Maryland; thence up the valley of Northwest Branch to near Burnt Mills, Maryland; and across country to Forest Glen, Maryland. Character of country traversed: rolling cultivated fields, 40 per cent; woodland, 60 per cent. Total distance traversed, 28 miles. Time in field, 5:00 a. m. to 6:15 p. m. Total number of species observed, 79; individuals, 771. Arthur H. Howell.

13.—Sligo Creek, Maryland. Traveled on foot, 12 miles, from Takoma Park, Maryland, to Sligo Creek, and along the creek for a considerable part of its course. Character of country traversed: woodland and thickets, 100 per cent. Total distance traveled, 12 miles. Time in field, 4:40 a. m. to 3:45 p. m. Total number of species observed, 63; individuals, 937. R. W. Williams and W. C. Henderson.

14.—Rock Creek Park, D. C., and Zoölogical Park, D. C. Traveled by electric car from Washington, D. C., north to the District Line, 3 miles; on foot, 10 miles, through Rock Creek Park and the Zoölogical Park, chiefly in the Rock Creek Valley. Character of country traversed: woodland, 90 per cent; open fields, 10 per cent. Total distance traveled, 13 miles. Time in field, 5:30 a. m. to 5:00 p. m. Total number of species observed, 76; individuals, 876. Miss M. T. Cooke and Miss K. B. Baird.

15.—Chevy Chase, Maryland, to Chevy Chase Lake, Maryland, Glen Echo, Maryland, and Chain Bridge, D. C. Traveled on foot, 12 miles, from Chevy Chase, Maryland, to Rock Creek, Maryland; thence to Chevy Chase Lake, Maryland,

and Brookeville Road, Maryland; also from Chevy Chase, Maryland, west to Glen Echo Junction, Maryland, on the Potomac River; thence south along the Conduit Road to Chain Bridge, D. C., and back to Chevy Chase, Maryland. Character of country traversed: woodland, 80 per cent; fields, 20 per cent. Total distance traveled, 12 miles. Time in field, 5:00 a. m. to 9:20 a. m.; and 12:50 p. m. to 5:40 p. m. Total number of species observed, 67; individuals, 401. A. M. Stimson.

16.—Patuxent River, from Laurel, Maryland, to Bowie, Maryland. Traveled by train from Langdon, D. C., to Laurel, Maryland, and from Bowie, Maryland, to Langdon, D. C., 29 miles; on foot, 15 miles, along the Patuxent River from Laurel to Bowie, Maryland. Character of country traversed: timbered river bottomland, 75 per cent; open fields and pastures, 25 per cent. Total distance traveled, 44 miles. Time in field, 5:00 a. m. to 7:00 p. m. Total number of species observed, 74; individuals, 934. E. G. Holt.

17.—East Falls Church, Virginia. Traveled on foot, 2 miles, about East Falls Church. Character of country traversed: woodland, 100 per cent. Total distance traveled, 2 miles. Time in field, 5:15 a. m. to 7:30 a. m. Total number of species observed, 43; individuals, 136. Mrs. I. N. Gabrielson.

The accompanying table gives in more graphic form the number of each species observed by each party; also the total number of each species observed by all the parties during the day, as well as the other totals given above.

SOME FLORIDA HERONS.

JOHN WILLIAMS, ST. MARKS, FLORIDA.

An account of breeding colonies of *Hydranassa tricolor ruficollis* (Louisiana Heron), and of *Florida cærulea* (Little Blue Heron) may contain little information to one familiar with the breeding habits of these two species, but they may be of interest to those who have not had an opportunity to

see into such an assembly. While neither the Louisiana Heron nor the Little Blue were strictly speaking "plume" birds, yet because of their habits of nesting in colonies of considerable numbers thereby offering easy prey to the murderous demands of fashion, their numbers were greatly reduced during the years when plumes and other feather ornamentations were in vogue.

I had been familiar with these two species all over the region about St. Marks, along the rivers, at ponds and pools inland or along shore, away out in the open piney woods in the season of continued rains when hundreds of these birds may be seen walking or rather wading through grassy plains now inundated, but it was not until the early summer of 1912 that I came upon a nesting colony of either.

On May 23 of that year I collected a female Louisiana Heron from which a fully developed egg was taken. The bird was shot along the coast some eight or ten miles west of our lighthouse and near what is known as Shell Point beach. No opportunity for a search for the colony occurred until June 26, but numerous birds of the species were seen in the immediate vicinity prior to May 23. On the later named date about twenty pairs of Louisiana Herons were found about one mile from Shell Point on a small island about three-quarters of a mile off shore. The nests were placed in the lower branches of a narrow fringe of bushes that bordered one side of the island and were about as one might expect of a bird of this family. They were constructed almost if not exclusively of the common round salt marsh rush and were extremely frail. Several broken egg shells were found on the ground, some of which had doubtless been rolled out by force of wind or the careless handling of the old birds, as the nests were noticeably flat and afforded but slight security to the contents. At this date most of the nests contained eggs, mainly three in number, a few held two each, one contained six eggs, while one held two young birds seemingly about one week old, and another had three young, two of which were of about the same age

as those in the other nest, while the third youngster was but one-half the size of his companions. Fish Crows are plentiful and as a "Jackdaw" dearly loves his eggs in the shell, doubtless the small number of eggs in some nests might be readily accounted for. At this time it would have been fair to infer that the usual or normal clutch was three (3), but from later observations I would think four are more commonly laid as a full complement.

No other species of Heron was observed nesting with this colony or occurring in the immediate locality. I did not visit these birds again until June 6, 1915, when about forty pairs were found nesting in the same fringe of bushes in which the twenty pairs were located in 1912; while over one hundred pairs of the same species were found on an adjacent island nesting in a similar situation, except that the bushes were larger and in a more compact group.

At this date the contents of the nests were 1 to 4 eggs each; a few held very young birds. The existence of this colony in 1912 is not known. On May 7, 1917, this same locality was again visited and no birds were found nesting at either of the two sites noted, and as but two or three of the birds were to be seen drifting about in the vicinity it was surmised they had abandoned the neighborhood.

In preparing to leave the island in a row-boat, a landing was made across a small cove from the line of bushes that had formerly been used as nesting sites by these birds. On stepping ashore I was startled at seeing hundreds of Louisiana Herons spring up from the open, treeless marsh and immediately settle down again as I sank to cover. A few steps into the thick matted rushes and again the birds arose on hurried wingbeats almost directly upwards and drifted with much croaking farther down the island. A few steps more and I was in the midst of a nesting colony of these birds; every few yards a nest directly on the depressed rushes where a high tide had beaten down the tops of the tall rank growth. A hurried estimate of the number of these birds made approximately 500 individuals, but whether both

sexes were in the marsh I could not determine, and no accurate count of the nests was attempted, as they extended to a considerable distance in at least two directions—just how far was not discovered—and an enumeration under the conditions would have required more time than could be spared then, but enough was seen to convince me there were more than 150 nests, while there might have been two or three times that number. The nests contained from one to five eggs, but for the most part four, and as far as examined all were freshly laid. The nests were but little more than the scratching aside of the tangled rushes and a few broken pieces of the same laid crossing one another to aid in retaining the eggs from working down.

It would appear as if all the Louisiana Herons of the section had assembled in this nesting colony, as the two former sites were entirely abandoned and none other was found. The writer has never seen nor read of any of the Herons nesting in a similar situation, but it may not be as unusual as he supposes.

On taking my departure from the island the birds quickly commenced returning and seemingly all was again quiet before I had progressed many rods from shore. Why the birds left the bushes for such an open exposed location is a query; any extra high tide would have completely washed off the nests and it would seem that the contents of the nests, eggs or young, would be more exposed to Crows or "Jackdaws" on the open marsh than in the bushes. Possibly the available bushes would not have contained all of the nests of the greatly extended colony, but why were not the bushes also used to their capacity?

On June 3, 1916, I visited a nesting place of Little Blue Herons located four miles up the St. Marks river from our village and about a half-mile back from the river in a section of open piney woods known as Willis Bay, made up of a few scattered pines covering a tract of perhaps one and three-quarter miles by one mile and interspersed with numerous "Ty-Ty" ponds varying in size up to perhaps 150 yards in

diameter. In the ponds where the water was deepest and hence stood longest the central portions were open and free from bushes, while others were grown up solid with the "Ty-Ty," which I believe are a species of willow and grow extremely dense.

The Herons were occupying the bushes about one of these ponds and my notes of the trip relate that the pond was almost dry so far as surface water was to be seen.

The surrounding bushes extended perhaps 150 yards long by 60 to 75 yards wide and were 25 to 30 feet high down to not exceeding 10 or 15 feet at the east end. Fire had burned the outer border and the smaller bushes were difficult to penetrate on account of the close interlacing of the lower branches, and being killed by the fire were a formidable barrier to penetrate on a sultry day, with flies and mosquitoes swarming. Where the bushes were higher progress was easier by creeping under them.

Many young Herons were in the tops of the "Ty-Ty" and in the small pines at the outer edge of the clump. Younger birds were scattered over the bushes in the center where the nests were all located. Eight and ten nests were sometimes seen on a single bush. One nest held three eggs, several had single dead birds, other dead young were on the ground and two were seen hanging dead, caught as they had fallen, by the neck in slender forks of the branches. One young bird still unable to fly was walking about on the ground with a much smaller young one of the same species dangling from its mouth. The head of the small bird had been swallowed, bill foremost, and when uncoupled the skin of the head of the victim showed considerable progress toward digestion.

A single adult White Ibis was perched in the top of one of the bushes and eight or ten young Louisiana Herons were present. I estimated the number of Little Blue Herons at about 150, possibly not over 125, it being extremely difficult to get an accurate count of them as they traveled, sat or flew about. From 50 to 60 nests were seen and those still occupied contained from one to three young each. I had been

informed that many eggs had been taken from this colony early in the season to be eaten by workmen at a nearby sawmill, which would account for the varied sizes of the young birds as the nesting birds usually lay repeatedly if the nests are broken up. A number of the oldest juveniles could fly a little, while many were just able to walk from the nest and a few were too small to travel at all. In walking over the bushes both the toes and bill were used in grasping the branches.

A few Vultures were in the vicinity and two Florida Grackles flew from the bushes. Four White-eyed Towhees were at the outer border of the "Ty-Ty" and a Pine-woods Sparrow sang near at hand. Only a little water remained in the open, central portion of this pond, but the mud and ooze under the bushes made progress uncomfortable.

But eight or ten adult Little Blue Herons were seen about the pond during a stay of over an hour. The young taken from the nest had stomachs full to distention, the contents being for the most part Fiddler crabs, that must have been carried three to five miles, together with some other aquatic animal matter. One had an entire dry leaf of myrtle with the Fiddlers. The young and adults uttered a few complaining gutteral notes, but on the whole they were not clamorous.

The nests for the most part were small and frail; one or two were rather bulky and compact. Some nests were not exceeding five feet from the ground, while others were twelve to fifteen feet up.

On April 1, 1917, I again visited the "Ty-Ty" pond in Willis Bay and found 100 or more pairs of Little Blue Herons present, with four or five pairs of Louisiana Herons, one Green Heron and 40 to 50 White Ibises.

The Little Blues had nests scattered on the bushes overhanging the water in the center of the clump, some bushes containing four or five nests each, and these held from one to six eggs each. A few nests were still under construction. I saw no nest supposed to be of the Ibises, Louisiana or Green Herons at this time. The water was now fully two

feet deep in places and wading was treacherous and uncertain over logs, snags and roots, and I knew of the presence of at least one alligator and of *some* snakes.

The Ibises and Little Blue Herons flew up together when first alarmed and circled in a vast swarm. I saw no immature Little Blue Herons.

On April 4, 1917, the "Ty-Ty" pond was again explored. Waded through most of the pond. About 150 occupied and finished nests were observed. These contained from one to six eggs each. But one with six eggs, four was the most common number, and five frequently. Several held but three each.

Probably eight to ten pairs of Louisiana Herons were present and one of these was seen to carry a stick. At Shell point this species did not have fresh eggs until the seventh of May. White Ibises were still abundant and stood around on the bushes as if permanently located. A few nests from which Heron's eggs were removed on April 1st now contained one and two eggs each. Probably the former clutch had been incomplete.

As many as eight nests were in a single clump of "Ty-Ty," which made a diameter of about fifteen feet. But few nests were more than eight feet up, and many not exceeding five feet above the surface of the water. The nests varied greatly in size and form. Some a mere loose bunch of sticks through which eggs could be seen from below; others were a thick mass a foot or more of solid material. The average nest was about sixteen to eighteen inches across and six to eight inches in depth, with a slight central depression. In one case an egg had rolled from the nest and lodged in sticks at the side of the nest. Several eggs were on the ground beneath the nests. No Crows were seen in the vicinity.

On April 14, 1917, another visit was made to the "Ty-Ty" pond. I then estimated there were 150 pairs of the Little Blue Heron at the pond and about ten pairs of Louisiana Herons. Two or three nests were noted containing young just hatching. The old birds were noisy and quar-

relsome among themselves. When routed up they quickly settled back on the bushes.

Two males were seen pecking and striking at each other with a constant croaking and squawking. In one case a Little Blue and and a Louisiana Heron held a brief combat, which appeared to be bloodless. But one pair of White Ibises were present when I arrived, and later four more came. A nest of the Ibis was found containing three eggs. None others seen on this visit. Twenty-six nests of Little Blue Herons counted in one clump of "Ty-Ty," which was about twenty-five feet in diameter and none of these over ten feet above the water. Several, eight or ten perhaps, immature Little Blues were flying about. One shot showed a crest and a line down the back and on wings, changing to smoky-gray. The bill of this bird, except about one-fourth its length at the tip, was an intense deep blue, legs sage green. It was a male and the sexual organs considerably enlarged, but I have no idea they breed in this plumage.

Several subsequent visits were made to this pond and the development of the young Herons was watched with interest. It was noted that when an adult came with food, if the young were still in the nest the old bird flew directly to the nest, but if the young were able to fly the adult circled and lit well up in a bush or small tree and a young bird immediately flew to the old one and was fed.

In the case of the colony of Louisiana Herons no other species associated, but with the Little Blues I found the Louisiana and Green Herons—only one pair of the latter—and the White Ibises.

It might be of interest to record that the Ibises did finally decide to build at this same pond. The nests, some thirty or more, were completed, being built largely of twigs plucked from the "Ty-Ty," with leaves attached and placed well up in the tops of the bushes. Fifteen or more contained eggs on June 1st, one to three eggs each, but on June 8th but one Ibis was found at the pond and every egg had been broken, the shells remaining for the most part in the nest.

BIRDS OBSERVED NEAR MINCO, CENTRAL OKLAHOMA.

BY ALEXANDER WETMORE.

(Continued from March, 1918, Wilson Bulletin.)

40. *Coturniculus savannarum bimaculatus* (Swainson).—Western Grasshopper Sparrow.

Common; breeding. Western Grasshopper Sparrows were characteristic birds of the high, rolling prairie where it was not under cultivation. On May 25 the condition of the sexual organs in birds collected indicated that the breeding season had just begun. Males sang from the weed-stems, the tops of the buffalo pea, or fence posts. The usual song may be represented by the syllables *Ka-tsick Katsee-e-e-e.* Another song was a succession of squeaky notes given rapidly. Female birds were little in evidence and were flushed with difficulty from their shelters in the grass.

Three females collected average smaller than the measurements given for this form by Mr. Ridgway.[1] The males have shorter tails than is usual. In coloration the birds collected are typical *C. s. bimaculatus.* Compared with a series of *C. s. australis* they have less black and more rusty brown in the upper parts. The bill also is more slender than in eastern Grasshopper Sparrows taken in Virginia. Measurements in millimeters of the specimens collected are as follows:

	wing	tail
No. 1140 (Coll. A. W.) Minco, Okla., May 25, 1905, ♀ ad.	61.0	42.9
No. 1142 (Coll. A. W.) Minco, Okla, May 25, 1905, ♀ ad.	60.0	44.0
No. 1198 (Coll. A. W.) Minco, Okla., May 31, 1905, ♀ ad.	61.7	42.0
Average of three adult females	60.9	42.9
No. 1143 (Coll. A. W.) Minco, Okla., May 25, 1905, ♂ ad.	63.0	44.6
No. 1152 (Coll. A. W.) Minco, Okla., May 26, 1905, ♂ ad.	63.5	45.0
No. 1196 (Coll. A. W.) Minco, Okla., May 31, 1905, ♂ ad.	65.0	44.5
Average of three adult males	63.8	44.7

41. *Chondestes grammacus strigatus* Swainson.—Western Lark Sparrow.

Common; breeding. These birds were scattered over the rolling prairie country and seemed at this time all to be nesting. An adult male, collected May 23, has the plumage of the upper parts somewhat worn. It differs from *C. g. grammacus* in all of the char-

[1] Birds of North and Middle America, I, 1901, p. 210.

acters separating *C. g. strigatus* from that form. Length of wing 87 mm., tail 67 mm.

42. *Cardinalis cardinalis* (Linnaeus).—Cardinal.

Common in thickets and small growths of timber along streams and in hollows on the prairie. A nest containing five fresh eggs was found along Boggy Creek on May 23. This nest was placed in a small elm sapling. It was made of leaves and grass and was lined with rootlets. No specimens of the cardinal found near Minco were collected so that the race to which these birds belong is in doubt. It seems probable that they will prove to be *Cardinalis c. cardinalis.*

43. *Guiraca caerulea lazula* (Lesson).—Western Blue Grosbeak.

Common. Though Blue Grosbeaks were found nearly always in pairs they did not seem to be nesting yet. The birds frequented heavy weed growths, and many were seen along the railroad track where telegraph wires offered convenient perches. The males were in full song. These grosbeaks were rather wild and were suspicious of any approach so that I had trouble in securing those desired as specimens. A male taken near Minco on May 26 is in full plumage. Another secured near Leal May 31 has the head and neck all around blue while elsewhere the body plumage is brown. Indistinct spots and marking of bluish are evident on the ventral surface and on the hind neck is an irregular patch of brownish. Measurements of these specimens follow:

	wing	tail
No. 1157 (Coll. A. W.) Minco, Okla., May 26, 1905, ♂ ad.	90.0	67.5
No. 1193 (Coll. A. W.) Leal, Okla., May 31, 1905, ♂ ad.	90.0	67.0
Average of two adult males	90.0	67.3

	wing	tail
No. 1124 (Coll. A. W.) Minco, Okla., May 23, 1905, ♀ ad.	81.5	62.0
No. 1134 (Coll. A. W.) Minco, Okla., May 24, 1905, ♀ ad.	84.5	68.0
No. 1158 (Coll. A. W.) Minco, Okla., May 26, 1905, ♀ ad.	83.0	62.0
No. 1194 (Coll. A. W.) Leal, Okla., May 31, 1905, ♀ ad.	86.5	67.5
Average of four adult females	83.9	64.9

Both male and female are decidedly paler than the corresponding sex in *G. c. caerulea.*

44. *Passerina cyanea* (Linnaeus).—Indigo Bunting.

A common breeding bird. An adult female in rather worn plumage was taken near Minco on May 23.

45. *Passerina ciris pallidior* Mearns.—Pale Painted Bunting.

Common; breeding. Nonpareils were fairly common in brushy

areas, and while not wild, kept well concealed when followed. Males sang their pleasing songs constantly. The only specimen secured was an adult female in peculiar plumage shot May 25. This, at first glance, might pass for an immature male. It has a reddish wash over the under surface (varying from flesh color to salmon color) with a very faint rosy wash on the back and rump that renders comparison with other specimens somewhat difficult. This bird measures as follows (in millimeters): wing 68.0, tail 53.0.

Four females of *P. c. ciris* from South Carolina, Georgia, Florida, and Louisiana give the following measurements: wing 64-66 mm. (average 65.1 mm.), tail 50-54 mm. (average 52.0 mm.). Four females of *P. c. pallidior* from southern Texas have a wing measurement of 66-68 mm. (average 67.2 mm.), and a tail measurement varying from 51 to 54 mm. (average 52.2 mm.). The bird from Minco equals *C. p. pallidior* in measurements, and in addition agrees with birds from Fort Clark, Texas (the type locality of *pallidior*) in having the green of the crown grayer than in true *ciris*. This gray tone is less evident on the back because of the reddish wash present in this specimen.

46. *Spiza americana* (Gmelin).—Dickcissel.

Dickcissels, known locally as "field canaries" or "wheat birds," bred abundantly around Minco. Brush or weed grown tracts were favorite haunts, but the birds spread in great numbers everywhere through cultivated fields and along fences. The males sang their odd, emphatic songs all day long perched on a weed, post or some other point of vantage. Occasionally a bird sang while on the wing. A nest was found in a clump of buck brush near the South Canadian River, built in a fork one and one-half feet from the ground. The nest was made of grass and weed-stems and lined with fine grasses. It was thick walled, bulky and strongly built. One egg had been deposited.

A male Dicksissel, collected May 24, is in full plumage with a black shield on the throat, and a small black spot in the center of the breast below. Another, collected on May 23, was shot for a female, but on dissection proved to be a breeding male. In color and marking it is very similar to females. The throat patch is even more restricted than in many females, and the feathers of the pileum are heavily streaked. On the underparts the yellow is of greater extent, and the black submalar streak found in females is barely indicated. A breeding female was collected on May 25.

47. *Piranga rubra rubra* (Linnaeus).—Summer Tanager.

The Summer Tanager was fairly common and was apparently

on its breeding grounds. Two were seen near Minco May 26 and an adult male was taken near Leal on May 31. This bird is in full plumage save for a crescent of carrot red on the upper breast. The wing of this specimen (No. 1182, Coll. A. W.) measures 93.0 mm., the tail 72.0 mm.

48. *Progne subis subis* (Linnaeus).—Purple Martin.

Two or three pairs of Purple Martins were nesting in bird houses in Minco. They were seen May 23 and daily thereafter.

49. *Hirundo erythrogastra* (Boddaert).—Barn Swallow.

One individual was seen near Minco May 29.

50. *Stelgidopteryx serripennis* (Audubon).—Rough-winged Swallow.

Two were seen at a nesting hole in a railroad cut near Minco on May 28. Others were observed near Leal on May 31.

51. *Lanius ludovicianus excubitorides* Swainson.—White-rumped Shrike.

White-rumped Shrikes were rare in this region at this time. One was seen on May 24, another on May 26, and single birds were observed later. As no specimens were secured these birds are referred arbitrarily to *L. l. excubitorides*.

52. *Vireosylva gilva gilva* (Vieillot).—Warbling Vireo.

Warbling Vireos were seen on May 26 and May 29. None were taken. I thought that they were breeding.

53. *Vireo belli belli* Audubon.—Bell's Vireo.

Common; breeding. Bell's Vireos were found everywhere in thickets and many came into the yards of Minco. Plum thickets on the upland prairies furnished dense cover for them, and in these places it was almost impossible to get sight of the birds. In town I heard their harsh emphatic songs constantly during the many hours passed in preparing specimens. All attempts at transcribing the song on paper were failures and it is necessary to hear the notes at first hand in order to appreciate them. Though harsh the song was not unpleasing and its oddity in inflection and phrase did not become monotonous, though repetition was incessant. One nest found was swung from a crotch in an apple tree four feet from the ground. It was made of strippings from weathered weeds, bits of paper and cotton and was lined with fine grass and horsehair. It was small in diameter and rather deep. On May 31 this nest contained three eggs of the Vireo and one of a Cowbird, all fresh. On May 26 another nest made of fine grass and weeds and lined with fine grass was found in a plum thicket near the South Canadian River. This nest hung from a crotch one and one-half feet from the ground. Externally it was covered with cobwebs. It contained three Vireo's eggs and one of a Cowbird. All were fresh.

Another nest found the same day in a similar situation was not yet completed.

One specimen was collected, an adult male, taken May 26. This bird has the back very slightly grayer than in typical *V. b. belli* from eastern Kansas, the rump being decidedly brighter than the back. In this and in length of tail (which measures 46.5 mm.) this bird verges somewhat toward *V. b. medius* of southwestern Texas. In other respects it agrees with true *belli* and there is no hesitancy in allotting it to this form.

54. *Oporornis formosus* (Wilson).—Kentucky Warbler.

Kentucky Warblers were fairly common in dense thickets. Birds were seen on May 24 and 26. None were taken.

55. *Geothlypis trichas brachidactyla* (Swainson).—Northern Yellow-throat.

A tolerably common species. Individuals were seen on May 23 and 27 near Minco, and a breeding female was taken on Bacon's Ranch near Leal on May 31. This specimen (No. 1192, Coll. A. W.) measures as follows: Wing 54.0 mm., tail 45.0 mm., exposed culmen 10.1 mm., and tarsus 20.2 mm. The wing and tail measurements, though large, are within the maxima for this form. Compared with *G. t. occidentalis* this specimen is distinctly darker above.

56. *Icteria virens virens* (Linnaeus).—Yellow-breasted Chat.

Common; breeding. Chats frequented the thickets everywhere and from May 25 to 30 the males, under the excitement of the breeding period, were in sight more often than is usual. Twice birds were seen in open bushes singing loudly and posturing in an odd manner. They swung first to one side and then to the other, turning each time until the head and body hung down, a performance that could not fail to attract attention. Another flew up a few feet above a thicket and sang in the air, supporting himself with rapidly beating wings, while feet and tail hung loosely and the bird swung jerkily from side to side. Two males, collected on May 25, resemble typical *virens* in size and in the extent of the malar stripe, but are very slightly grayer above. These two measure as follows (in millimeters):

	Wing	tail	Exposed culmen
No. 1144 (Coll. A. W.) ♂ ad., May 25, 1905.....	77.0	74.0	14.8
No. 1150 (Coll. A. W.) ♂ ad., May 25, 1905.....	78.0	77.0	14.0

57. *Mimus polyglottos leucopterus* (Vigors).—Western Mockingbird.

Common; breeding. Western Mockingbirds nested in the yards in Minco and were distributed in suitable localities through the

country. I found them quite common in the thickets near the South Canadian River. An adult male, taken May 26, is typical of *M. p. leucopterus* in size and color. It measures as follows (in millimeters):

	wing	tail	exposed culmen	tarsus
No. 1159 (Coll. A. W.) ♂ ad., May 26, 1905	112.8	120.0	17.0	34.0

58. *Thryomanes bewicki cryptus* Oberholser.—Texas Wren.

An adult male, in breeding condition, was taken on Bacon's Ranch, near Leal, on May 31. Compared with *T. b. bewicki* this bird is much grayer above and whiter below, while the black bars in the under tail coverts are decidedly narrower. It agrees with a series of *T. b. cryptus* from Texas in color and in size save that the tail is shorter than the wing instead of equal to it or longer. The bird is in worn plumage. It measures as follows: Wing 58.4 mm., tail 56.5 mm.

MINUTES OF THE NINETEENTH ANNUAL MEETING OF THE NEBRASKA ORNITHOLOGISTS' UNION.

The nineteenth annual meeting of the Nebraska Ornithologists' Union was held at Omaha, Nebraska, Friday and Saturday, May 10 and 11, 1918. The sessions were held in the Assembly Room of the First Unitarian Church, at Turner Boulevard and Harney Street. The annual banquet, this year of the conservation type, took place in this room conjointly with the annual dinner of the Nebraska Audubon Society at 6:30 on the evening of May 10. Eighty-five members of the two societies of bird lovers were present.

Following the dinner at 7:45 p. m. the members of the N. O. U. retired to the Auditorium for a short business session, with President C. E. Mickel in the chair. The reports of the officers were received, and an Auditing Committee and a Nominating Committee were appointed, the former committee consisting of Mr. Wilson Tout and Misses McDonald and Pyrtle, and the latter committee consisting of Professor R. W. Dawson, Mrs. L. R. Button and Miss VanSant. While these committees were deliberating the society proceeded with the election of new members.

The names of eight persons were proposed for membership in the society and all were elected, as follows: Mr. Cyrus Black of Kearney, Mr. A. M. Brooking of Inland, Mrs. A. J. Cornish of Lincoln, Miss Blanche Garten of Lincoln, Mrs. H. Hapeman of Minden, Mr. Paul Hoagland of Omaha, Mr. W. G. Landers of Norfolk, and Mrs. Anna Witt of Scribner.

The Auditing Committee then reported that the accounts of the Treasurer had been found to be correct, and upon motion this report was accepted by the society. The report of the Nominating Committee was then presented, and the following officers were elected for 1918:

President—Mr. A. M. Brooking, Inland.

Vice-President—Miss Jeanette McDonald, Omaha.

Secretary-Treasurer—Professor M. H. Swenk, Lincoln.

Fifteen members were present at this session of the N. O. U., as follows: Mesdames W. F. Baxter, L. R. Button, Mary Ellsworth, Alice E. Hitte, G. A. Loveland, C. W. McCaskill, Jeannette McDonald, E. Ruth Pyrtle, Elizabeth Rooney and Elizabeth VanSant, and Messrs. R. W. Dawson, W. G. Landers, C. E. Mickel, M. H. Swenk, and Wilson Tout.

On motion the Secretary-Treasurer was authorized by the society to invest two hundred dollars of its funds in Liberty Bonds, and to apply any balance remaining toward the support of the Wilson Bulletin during 1918.

The business meeting then adjourned, the members returning to the Assembly Room, where the public lecture of the evening was given at 8:15 by the retiring President, Professor C. E. Mickel, on the subject, "The Warblers of Nebraska." This lecture was illustrated by a series of over forty beautifully colored slides, especially prepared for this occasion, including every species of the family *Mniotiltidae* which has an established place on the Nebraska list. The speaker described the identification marks and general habits of the various species, and was assisted by Mrs. L. R. Button of Fremont, who gave descriptions and illustrations of the songs of the species known to her. The Assembly Room was filled at this lecture, which was intended to be a preparation for the warbler search of the following day. Professor M. H. Swenk introduced the speaker and presided over the discussion which followed.

The plans for the field day on Saturday were announced, and the meeting adjourned at 9:45 p. m.

On Saturday, May 11, the sixteenth annual field day of the Union was held. This day was this year made a "Warbler Day," since the date about coincided with the height of the warbler migration at Omaha and the region covered in this field trip was one of the very best in the state for finding these handsome and interesting birds. There were two principal parties, one leaving South Omaha at 7:00 and the other at 8:00 a. m., both entering Fontenelle Forest at Childs' Crossing after subdividing into smaller parties of ten to fifteen each. Over one hundred persons participated in the field day, the various parties meeting at noon for a picnic dinner at

"Coffin Spring," after which the return was made. The total list of the day included eighty birds, as follows:

Bluebird, Robin, Olive-backed Thrush, Gray-cheeked Thrush, Wood Thrush, Blue-gray Gnatcatcher, Ruby-crowned Kinglet, Long-tailed Chickadee, White-breasted Nuthatch, Western House Wren, Carolina Wren, Brown Thrasher, Catbird, Redstart, Yellow-breasted Chat, Maryland Yellow-throat, Louisiana Water-thrush, Grinnell Water-thrush, Ovenbird, Black-poll Warbler, Cerulean Warbler, Myrtle Warbler, Palm Warbler, Yellow Warbler, Tennessee Warbler, Orange-crowned Warbler, Golden-winged Warbler, Prothonotary Warbler, Black and White Warbler, Bell's Vireo, White-eyed Vireo, Yellow-throated Vireo, Warbling Vireo, Red-eyed Vireo, Tree Swallow, Rough-winged Swallow, Barn Swallow, Scarlet Tanager, Summer Tanager, Dickcissel, Indigo Bunting, Rose-breasted Grosbeak, Cardinal, Towhee, Lincoln's Sparrow, Song Sparrow, Field Sparrow, Clay-colored Sparrow, Chipping Sparrow, White-throated Sparrow, Harris' Sparrow, Lark Sparrow, Goldfinch, Bronzed Grackle, Rusty Blackbird, Baltimore Oriole, Orchard Oriole, Western Meadowlark, Red-winged Blackbird, Cowbird, Crow, Blue Jay, Traill's Flycatcher, Acadian Flycatcher, Phoebe, Crested Flycatcher, Arkansas Kingbird, Kingbird, Ruby-throated Hummingbird, Yellow-shafted Flicker, Red-headed Woodpecker, Northern Downy Woodpecker, Belted Kingfisher, Yellow-billed Cuckoo, Sparrow Hawk, Broad-winged Hawk, Western Mourning Dove, Killdeer, Great Blue Heron, Blue-winged Teal.

The occurrence of the Summer Tanager, of which there are very few records for the state, and of the Carolina Wren, at least two pairs in full song, were especially noteworthy results of this field day.

REPORT OF TREASURER, 1917-1918.

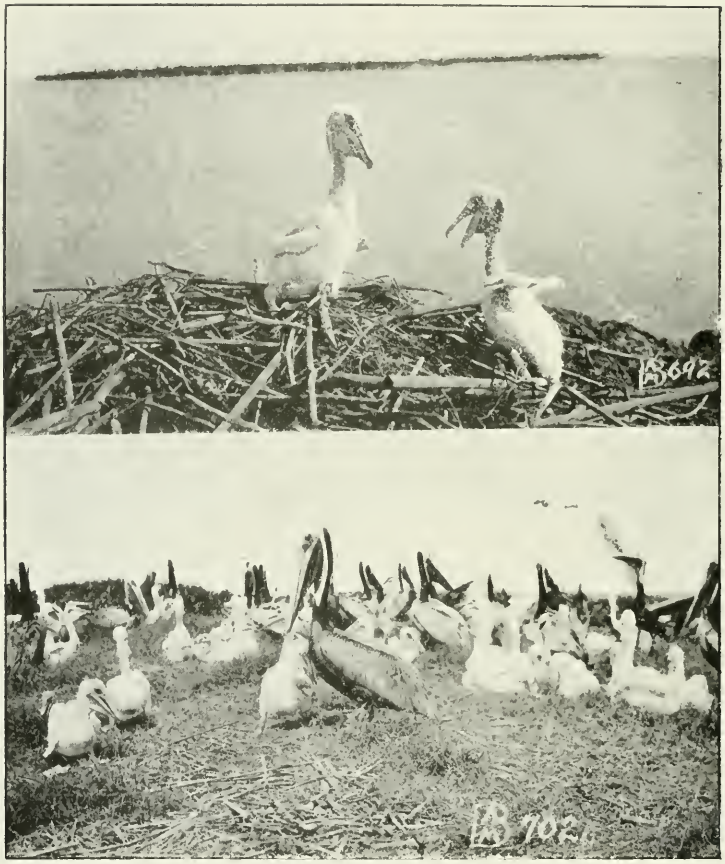
Receipts.

Cash on hand, May 4, 1917	$205.99
Annual dues collected	74.99
	$279.99

Expenditures.

Wilson Bulletin	$ 58.50
Postage	4.00
Express and exchange	.43
Balance on hand, May 10, 1918	217.06
	$279.99

MYRON H. SWENK,
Secretary-Treasurer N. O. U.



BROWN PELICANS

THE
WILSON BULLETIN
NO. 104
A QUARTERLY JOURNAL OF ORNITHOLOGY
VOL. XXX SEPTEMBER, 1918 NO. 3
OLD SERIES VOL. XXX. NEW SERIES VOL. XXV.

THE BROWN PELICAN,—A GOOD CITIZEN.

BY ALFRED M. BAILEY, LOUISIANA STATE MUSEUM.

Fishermen along the gulf coast, especially of Florida and Texas, have been complaining that the Brown Pelican is a destroyer of food fish, and these men have been flooding the offices of the Food Administration with letters asking that the pelican be exterminated.

The head of the Department of Conservation of Louisiana, Mr. M. L. Alexander, having received notice of these complaints, sent out an investigating committee to collect specimens along the gulf coast, and gather all the data possible concerning the different fish-eating birds. The Department, together with the State Museum, has long been compiling notes on the value of different birds aside from the æsthetic, and although we were convinced that the pelican was not guilty as charged, our data was not sufficient to give entire satisfaction.

The party, under the leadership of the State Ornithologist, Mr. Stanley Clisby Arthur, Mr. T. Gilbert Pearson of the Audubon Society, and the writer as the representative of the State Museum, left New Orleans the 6th of June on the Department yacht, "Alexandria." It was our intention to start off the Mississippi coast, and work westward, touching all places where pelicans were known to congregate in any numbers, and compile our data as circumstances warranted.

The Chandeleur chain was first visited, and several days were spent on the different little islets and sandspits making up the group. Here sea birds were nesting by the thousands, a veritable snowfield of swirling birds continually circling over head, and the ground was covered with eggs. A couple thousand pelicans were nesting on Errol and Grand Cochere, but there were no young as yet.

After a short run to Breton, Battledore and Hog islands, and a day studying the nesting skimmers, the "Alexandria" was headed for the "Mud-lumps" of the Mississippi river. These Mud-lumps themselves are interesting, for they are formed by a great pressure below thrusting up the earth's crust until small islands result. These lumps show the evidence of the great forces beneath, by the faulting so characteristic of rocky ledges. But if the shifting of great masses of earth is not sufficient to attract the naturalist, the enormous wealth of bird life congregated on such a small area would surely appeal to him. For there, where the Mississippi empties her muddy waters into the gulf, the largest colony of Brown Pelicans in North America have chosen their homes, and the fourteen little islets are literally covered with birds, at least fifty thousand, according to our estimate. The cries of the young birds were plainly audible from the "Alexandria," over five hundred yards off the islands, and the continual going and coming of the long strings of adult birds, almost always flying so close to the water that it seemed they must wet the tips of the primaries at every stroke, told plainly the great quantities of fish needed to feed such great numbers.

What better place than this, the largest breeding colony of Brown Pelicans in the country, to study the fearful ravages being made upon our dwindling food supply? Surely, if the food fishes are being destroyed as rapidly as the fishermen would have us believe, some evidence of it would be seen on these islands, where the young must be fed almost hourly. But try as we might, and we really wanted to find a few game fish that our data would not resemble a "stacked deck," we were not able to find a single fish that man would eat. The

BROWN PELICANS

entire diet of the pelican seems to be of menhaden, a small bony sardine, that is used as fertilizer in the east. If the fish is of no more use to man than that, we surely could not begrudge this fine bird the few that he needs to satisfy his daily wants.

We took the youngsters and made them disgorge into our buckets, and we collected sundry specimens that were deposited on our shores as we trod among the fuzzy little fellows, but our data was always the same, just menhaden. And although we traveled clear to the Texas coast, stopping at all likely places, the answer was always the same. We preserved the stomachs of the birds in formaldehyde, and sent them on to Washington, while the skins were saved for the large Habitat Group being prepared for the State Museum.

The pelican is an easy-going, unsuspicious sort of fellow, and they paid no attention to my little blind, but came circling in and alighted before I had scarcely concealed myself. They are rough with the babies, and cuff and peck them unmercifully until the youngster finally succeeds in crawling under the crouching parent, and is so protected from the hot sun. I marvelled at the way the young feed, downy fellows almost as big as an old one, and actually weighing more, beg their food the minute the mother bird appears. They beg with a great fluttering of wings, and run their bills down the older bird's throat, until it seems they are trying to crawl inside. And all the time they carry on with little complaining notes, and hunch forward, in exactly the same way a calf does when he gets too eager for his dinner. They are quarrelsome too, and a couple of them started a tussling match, and rolled into Mr. Arthur's blind, and indeed, that was the difficulty in taking motion pictures, the birds came in too close. One fellow tried to let the tent rope down, and another, attracted probably by the reflection of the lens, stuck his head into the blind to see what it was all about.

The nests of the pelicans vary a great deal on the different islands. On Errol we found the nests built rather high, and a few of them in bushes as much as four feet off the ground, bulky,

substantial nests, while on the Mud-lumps, a few coarse sticks clumsily piled together sufficed. It is interesting to note the great range of time for nesting among the different colonies. On the Chandeleur chain we found fresh eggs only, while on the Mud-lumps, scarcely a hundred miles away, we found young six weeks old,—and not even an egg from there on to Texas, although the birds had started building on Timbalier. The first nesting birds on the Lumps chose the islands farthest out, and as these grew too densely populated, the islands nearer in were occupied until the innermost one had its pelican colony, — fresh eggs and very small young, while the birds on the outermost were already large enough to leave. The lighthouse keeper told us the outer islands would again be populated, that the birds nested continually from the middle of April until August, which raises the interesting question of whether the pelican raises more than one set of young a year. We took specimens in winter plumage, or rather the brown immature plumage which showed all signs of breeding, and other birds taken in the highest of plumage were evidently not breeding at all. We enjoyed our little survey, and although we desired more time among them, we came away happy with the knowledge that the pelican is safe, "not guilty" of being a food slacker.

NOTES ON THE FEBRUARY BIRDLIFE OF SOUTHERN MISSISSIPPI AND LOUISIANA.

CHRESWELL J. HUNT, CHICAGO, ILLINOIS.

I arrived in New Orleans about noon of January 28, 1918. That afternoon, just across the Mississippi River, in Algiers, I heard my first wild Mockingbird sing. It was a warm afternoon and Meadowlarks were also singing and a number of Grackles flew over. It surely did seem good after the snowdrifts that I had navigated in Chicago the previous morning. The following three days were spent about the city of New

* Read before the Chicago Ornithological Society April 9th, 1918.

Orleans. Louisiana claims the great Audubon as a native and one hears his name everywhere about the city of New Orleans. Except for the Herring Gulls seen about the river no birds were noted, but I visited the Louisiana State Museum and met Mr. Alfred M. Bailey, the ornithologist there, who showed me many interesting things. I also met Mr. S. C. Arthur, Louisiana State Ornithologist, who presented me with a copy of his recent list of "The Birds of Louisiana." To these two gentlemen I wish to express my thanks for many courtesies extended.

On February 1st I left New Orleans for Biloxi, Mississippi. As you travel east from New Orleans on the Louisville & Nashville R. R. you traverse one continuous stretch of marsh and salt meadows. From the train windows I noted numbers of Herring Gulls; a few ducks; any number of Grebes, mostly in bunches of from three to six, some of them were quite shy, while others did not seem to mind the train in the least; occasional flocks of Blackbirds; one Great Blue Heron, and several small Herons that I was unable to identify. After crossing Bay St. Louis, Mississippi, we strike the first high ground east of New Orleans. Here we come upon patches of pines and cultivated fields, pecan orchards and grand old Live Oaks with their festoons of grey moss.

The following three weeks, February 1st to February 20th, were spent at Biloxi, Mississippi, from which point I explored most of the extreme southern end of Harrison County. The town of Biloxi is situated upon Mississippi Sound. It is built upon a point of land and is almost surrounded by salt water. The principal industry of the place at this season of the year is oyster canning and the water front is rich in piles of oyster shells and there are fine shell roads running back into the country. Mississippi Sound is quite shallow here and the little oyster schooners have to make many turns coming into the harbor. Deer Island lies about a mile off shore. This island is a long narrow strip of land with a small pine grove in the center and much sandy

beach, where Brown Pelicans, Black Skimmers and Gulls love to congregate. Ship and Cat Islands, which separate the Sound from the Gulf of Mexico proper, lie some fifteen miles off shore and are of considerable size.

Birdlife was fairly plentiful about Biloxi, though not very rich in species. I believe the Killdeer and the Myrtle Warbler were the most common birds seen. The Myrtle Warblers—the natives seemed to know them by the name "Snowbirds"—were found almost everywhere, but were seen most along the water front flitting here and there among the oyster shells. At first I was surprised to see them in such places, but I soon discovered that these shells harbored any number of small flies, which no doubt explained the Warblers presence among them. The "Dee-dee" of the Killdeer was an ever-present sound. Great numbers of large Gulls—Herring or Ring-billed—were always to be seen about the Sound and Back Bay. Mockingbirds were common about the gardens and lawns and were frequently heard singing. Blue Jays were common. Red-headed and Downy Woodpeckers were plentiful and a few Flickers were seen, but I was surprised not to find the Red-bellied Woodpecker at Biloxi. A great number of Fish Crows were seen. I believe all the crows seen were of this species. Cardinals, Carolina Wrens and Tufted Titmice were plentiful and in song at almost all times. Chewinks and Brown Thrashers were common and both singing. One House Wren and one Water-thrush were seen. Carolina Chickadees and Pine Warblers were common in the pine woods. One Catbird was noted and numbers of Hermit Thrushes. A few Goldfinches were seen—a single bird each time. Bluebirds were fairly common, and back in the pine woods were found a few small flocks of Robins, which were decidedly shy. Flocks of Red-wings and Grackles were frequently seen. A few Meadowlarks and Kingfishers; both the Black Vulture and the Turkey Vulture; one Marsh Hawk and one Sparrow Hawk; a number of small Flycatchers, all of which I took to be Phoebes; a few Loggerhead Shrikes—known locally as "Bull-head Mockingbird";

and several Palm Warblers were seen. A few Bob-whites were said to be about, and one day I came upon some boys who had just shot one of them. White-throated Sparrows and a few Vesper Sparrows were seen, the White-throats were fairly common, but no other species of our native sparrows was noted. It appears that the bulk of the Song Sparrows, etc., must spend the winter somewhere north of this point. Quite a number of Loons and Red-breasted Mergansers were seen and also a few Cormorants.

February 5th was spent at Ocean Springs, Mississippi, just across the Bay in Jackson County. It was a fine warm day and birds were singing everywhere. It reminded one of mid-April back in Chicago. Noisy flocks of Grackles and Redwings, Yellow-bellied Sapsuckers and Flickers calling, Chewinks and Brown Thrashers singing, as also were Mockingbirds, Meadowlarks, Carolina Wrens, Tufted Titmice and Cardinals. The grass was beginning to look very green and long catkins were hanging from the alder bushes, or bushes that looked all the world like our alder, and here and there green leaves were opening. The past winter was a cold one in the South, as it was all over the country, and up to now, save for the green Live Oaks and Magnolia trees, the general aspect of this country was winter. But today it was spring, with frogs calling and butterflies flitting here and there, and in the gardens several handsome Japonicas, loaded with bright red blossoms. But the orange orchards about Ocean Springs had mostly been killed by the frost, and the pecan crop, for the past two years, has been blown off the trees before the nuts ripened, by severe storms from the Gulf.

On February 13th I rowed over to Deer Island and watched for some time several flocks of Black Skimmers. What curious birds they are, and their cries, as the flock circles about, remind one of the barking of dogs. While on Deer Island I saw two Laughing Gulls and a few Caspian or Royal Terns. On entering the pine grove on the island I made another discovery. It was the first February mosquitoes that I ever saw and they were certainly abundant and very attentive.

Leaving Biloxi on February 20th I went back to New Orleans and thence to Mandeville, St. Tammany Parish, Louisiana. The village of Mandeville is situated upon the north shore of Lake Ponchartrain, almost directly across the lake from New Orleans—twenty-one miles across the lake as the crow flies, but about sixty miles around by railroad, and as there were no boats crossing the lake at this season it was necessary to take the New Orleans & Great Northern for the sixty miles—a ride of some three hours through pine woods and marsh-land, where the new green leaves were opening and things looked very spring-like indeed. The following four days were spent in the country about Mandeville. Biloxi, Mississippi, was a thriving little town, but Mandeville, Louisiana, was decidedly rural. The most noticeable thing about the place to the northern visitor was the great numbers of live stock that roamed about at will. Cows and horses everywhere, on the streets and sidewalks, and back in the woods it was cows and goats and little razor-back hogs. There are no fence laws and these animals go and come wherever and whenever they please.

While the residents of southern Louisiana seem one and all to have a great affection for the Mockingbird, this species seems to be about the only one for which there is any esthetic feeling. Other birds appeal to them entirely according to the quality of the bird's flesh and this makes the work of the Department of Conservation very difficult in enforcing its laws for the protection of the insectivorous birds. These people have shot Robins and Wood Thrushes and Vireos and Kingbirds all their lives and it is difficult to explain to them why they should stop it now, and still harder to keep them from killing these birds. Mr. A. E. Manint, the Department of Conservation's agent in St. Tammany Parish, has done remarkably good work in protecting the birds in his territory and at the same time has kept the good will of the people. He has been diplomatic, and from what I saw it appears that most of the people like him and respect his authority.

People with whom I talked knew the birds by local names —to me entirely new names—and in many cases it was difficult to tell what species they were talking about as their efforts to describe the bird's appearance were often very misleading. For instance they told me that I should be there a little later when the "Pops" came. Their handsomest bird, they said, was the "Red Pop," while the "Blue Pop," and the "Green Pop" were also beauties. I later found that their "Red Pop" is the male Painted Bunting or Nonpareil, while their "Green Pop" is the female of this species. And the "Blue Pop" is the male Indigo Bunting.

Then they told me about the "Big Caille"—(pronounced Big Ki)—the game bird par excellence—a bird that feeds upon the magnolia seeds; a bird whose flesh some of the most famous French chefs had pronounced the finest eating in the world. And then there was the "Little Caille" and the "Black Caille," both shot along with the "Big Caille," but the flesh of the "Big Caille" surpassed them all. From the descriptions given me I decided that this "Big Caille" must surely be one of our Thrushes, and I later found this to be correct. The "Big Caille"—the most famed of all the game birds—is none other than the Wood Thrush. I have always heard the Wood Thrush praised, but never before from this standpoint. I have heard the Wood Thrush proclaimed the finest songster in North America. No doubt with us this species ranks foremost in esthetic value. To many of us northern folks it is indeed the bird of birds. It is perhaps the very last bird we would care to slaughter. But down in the country around Mandeville they love the "Big Caille"—when he is browned just right and served upon the table. And there is perhaps more hard feeling against the Department of Conservation for prohibiting the killing of the Wood Thrush than there is about the protection of any other bird. But we must remember that these southern folks never hear the Wood Thrush sing. They only know him as a silent bird of the woods that arrives in flocks sometime in September, at which time he is feeding mostly upon a vegetable diet. It

is said that when he once tastes the magnolia berry he flies up into the trees and stays right there feeding upon the bright red fruit until he becomes so fat that when shot his breast will burst open when he hits the ground. At this time the flesh is said to be almost as red as the magnolia seeds and to have a decided magnolia flavor. Later they feed upon the fruit of the sweet bay and gum trees, at which time they are not considered as good eating. All the Olive-backed Thrushes were shot under the name of "Little Caille" and the Catbird under the name of "Black Caille." These birds also feed upon the magnolia fruit.

I spent all day of February 22nd in the woods with Mr. Manint, who took me to the most likely spots for birds in the locality. He took me to a swamp where he says there is a small flock of Wild Turkeys, but although we tramped about a good deal we saw no trace of them. I made the acquaintance of the Red-bellied Woodpecker. This bird was very common about Mandeville. We came upon a large flock of Pipits. Two of these collected proved to be Sprague's Pipit. Robins and Bluebirds were common everywhere. Cardinals, Carolina Wrens, Tufted Titmice, Mockingbirds, Brown Thrashers, Chickadees, Redwings, Meadowlarks and Grackles were singing. Yellow-bellied Sapsuckers, Flickers, Downy and Red-headed Woodpeckers were abundant. Numbers of Chewinks and Phoebes and Hermit Thrushes were seen. They call the Hermit Thrush the "Chalk" from the cluck which this bird makes. Blue Jays, Loggerhead Shrikes and Killdeers were common. A Great Horned Owl was heard calling and one Sparrow Hawk was seen. In the pine woods Pine Warblers were singing and a few Ruby-crowned Kinglets were seen. All the Crows seen were, I think, the American Crow. A few White-throated Sparrows and Goldfinches and one Swamp Sparrow were noted. Bob-whites were said to be about, and I saw several Black Vultures, Kingfishers and Myrtle Warblers, which I believe completes my Mandeville list.

I will never forget my last day at Mandeville. To me it

was like a May day. The leaves were fast coming out on the shrubbery. Red Maples were in full blossom. Frogs and Toads were singing. Violets were blooming everywhere in the woods and in all the gardens Narcissus and Daffodils, May haw and Dogwood trees were white with flowers, and many other shrubs that were entirely new to me. Birds were singing everywhere—Mockingbirds, Brown Thrashers, Cardinals, Tufted Tits and Carolina Wrens. And the bright varnished leaves of the big Magnolia trees and the grey-green of the Live Oaks, and everywhere the grey moss hanging. Peach and Pear trees were in full bloom and the mosquitoes were also there by the hundreds and only too anxious to annoy one. I should have liked to have spent a few days more at Mandeville, but I received word that I must be back in Chicago by February 27th, and it was not without a feeling of regret that I left the sunlit southern woods and turned my face northward, but still the thought cheered me that I would reach Chicago ahead of the birds and would have the novelty of watching the spring arrive twice this year.

A VULTURE CENSUS AND SOME NOTES.

BY JOHN WILLIAMS, ST. MARKS, FLA.

"One might almost be willing to be a Buzzard to fly like that!" *

Familiarity may breed contempt in some instances, but I have ever found that an intimate acquaintance with Nature in any aspect, at any season, in any clime, invariably leads to fresh wonderment and renewed kinship and esteem. Vultures are not commonly objects for adoration, I verily believe, and yet they have many attributes to be admired.

Majestic Ease would seem to be an appropriate expression for the wide-encircling, smooth and graceful evolutions of *Cathartes aura septentrionalis* as he serenely defies the tempest on unbending wings, calmly floating far on high or again

* Bradford Torrey, in "A Florida Sketch Book."

descending in more or less rapid turns towards the earth. Tireless he seems, and unless it be for a more speedy ascent it is seldom that the beat of his wings is to be observed. There is much to admire in this master of aviation from whom we may learn the conquest of the air. Every curve and bend of sail so adjusted to gain the vantage of the lightest breeze or float on calmest air; an engine powerful to conquer the hurricane, balanced to finest poise and rudder of perfect control.

Not so much can be said for the grace of the other member of this family found in our southern states. While even more robust in appearance, *Catharista urubu* fails in engine power or cut of sail and is forced to greater effort in many evolutions. At times they may be seen high in air sailing on even keel with never a wing beat, but with stiffening breeze, in circling flight the balance wheel seems out of true and a few quick strokes are needed to make the turn and a similar effort, alternating with a glide, is their mode in straight away flight.

In contour, while flying, the two species present marked contrast. The Turkey Vulture is the larger appearing bird with wings and tail longer. In this species the forward contour of the wings presents a recurved aspect under usual conditions of flght, tending backward towards the tip where the longer primaries are usually widespread like open fingers. The other species has wings of wider tapering form from body to tip, which is gracefully and abruptly slender; the whole wing with a slightly forward curve under usual conditions. The head and tail show from below at a distance in about equal prominence. The Black Vulture carries a prominent grayish or light-colored area at the extremity of the wings, showing plainly from above or below when the bird is in flight. With the Turkey Vulture a similar effect is shown along the outer, under border of the secondaries when the bird is flying.

Turkey Vultures in general are more solitary in their hunting expeditions, although they may congregate in large num-

bers when food is abundant, but with the other species it is the rule that several are to be seen in company as they patrol the air; my observations indicate that the two species fraternize but slightly at a repast. One will predominate while the other may be in evidence, but frequently only seen awaiting an opportunity to participate later.

In coming down to alight, the Black Vulture usually circles but little; he may come on half-closed wings with mighty rush or drop gently down, down, down in an almost vertical line, with wings well open or in graceful spirals, approach the meal, but however it may be the legs will usually be seen to drop some time before the bird alights; on the other hand the Turkey Vulture seems more determined on investigation or may be more alert to danger and rarely drops direct to perch or food but circles and quarters before coming to rest and no sight of dropping feet or legs until the final stop. Again a difference may be seen in times of heavy winds; the larger bird being able to adjust itself to gusts and squalls by dip of planes, while the shorter, broader wings of the Black Vulture demand the wing beats at such times.

These birds fill an important position in our southern land, particularly where we have the open range. They are in no degree harmful, and yet it is not unusual for some wise-headed legislator to conceive the idea of their spreading disease — Hog Cholera, Glanders, Anthrax, etc., and will too often succeed in making some unfortunate statute removing protection from these valuable birds.

COURTSHIP AND NESTING.

Black Vulture—I have several times noticed what I took to be a love flight or courtship in which two birds make rapid, prolonged flight in wide-spread circles, lasting eight or ten minutes, at times shorter and again repeated soon. On February 10-21-24 and March 10 of different years I have recorded such occurrences and never have seen it with Turkey Vultures.

March 24 two eggs were seen on the ground in the hollow

burnt-out base of a large, standing living pine. These eggs were removed and on April 20 two eggs were found in a similar site about two hundred yards from the former location.

TURKEY VULTURE—On April 17 a single young bird was seen, about two weeks old.

April 29 of another year two eggs were found; incubation almost completed.

Coming now to the actual enumeration: I have for the past three years, each day recorded the greatest number of each species of these Vultures, seen at one time. I cannot claim any exact result for such uncertain work. It was done as occasion presented while about my usual duties or when opportunity offered. It perhaps gives a fair idea of the comparative abundance of the two species and *possibly* some notion of their numbers here. Following the tables will be noted some causes for certain divergences in corresponding months of the period:

October and November are months when we usually have fish in greatest abundance and many are salted, while the offal attracts the Vultures. February and March and sometimes April are months when, following a severe winter, the mortality of stock on the open range is considerably increased and Vultures are more in evidence.

During 1916 this stock loss was greatest in February, while in 1917 and 1918 such loss was about a month later, as shown by the increased numbers of Black Vultures recorded. The Turkey Vultures do not seem to congregate in the spring to the degree they do in the fall. Excess in numbers of Black Vultures in August, 1917, was due to several bountiful feasts of alligators, goats and hogs. The greatest number recorded for a single month was in November, 1915, when 771 Black Vultures and 766 Turkey Vultures were noted.

The largest number seen during one day was on November 7, 1915; 142 Black Vultures and 163 Turkey Vultures were then counted.

During the three years there were 75 days when no Black

	BLACK VULTURE												TURKEY VULTURE											
	Totals			Daily Average			Daily Max.			Daily Min.			Totals			Daily Average			Daily Max.			Daily Min.		
	*1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
										°16	1	2										3	1	1
August	57	61	255	1.84	1.97	8.23	13	10	31	0	0	0	103	62	73	3.31	2.00	2.35	9	5	7	0	0	0
										5	11	1										2	11	1
September	202	156	136	6.73	5.20	4.55	25	59	15	0	1	0	189	108	45	6.30	3.60	1.50	14	10	2	1	1	0
										1	6	6										3	6	6
October	378	123	325	12.20	3.97	10.50	44	17	49	0	1	1	427	110	101	13.80	3.55	3.27	94	14	13	2	1	1
										1	1	3										1	1	3
November	771	530	259	25.70	17.66	8.24	142	63	52	2	1	0	766	497	206	25.53	16.56	6.87	163	116	27	0	1	1
										6	2	2										1	2	5
December	132	132	165	4.26	4.26	5.32	20	22	16	0	0	0	157	119	95	5.07	3.84	3.06	28	9	10	0	0	1
										8	9	2										3	9	6
January	226	215	156	7.29	7.17	5.03	37	53	15	0	1	0	86	158	100	2.77	5.27	3.09	6	47	8	0	1	1
										1	6	8										4	6	11
February	273	214	104	9.41	7.64	3.71	61	39	16	0	1	0	86	66	66	2.96	2.36	2.36	7	5	6	2	1	1
										2	5	4										2	5	6
March	176	375	408	5.68	12.10	13.15	16	31	54	1	1	0	104	86	115	3.55	2.77	3.71	12	6	12	1	1	1
										4	8	2										5	8	6
April	304	181	316	10.13	6.03	10.53	26	44	43	1	1	1	73	77	84	2.43	2.57	2.80	4	6	12	1	1	1
										1	11	6										5	11	8
May	260	103	203	8.39	3.32	6.55	35	15	31	1	1	1	77	66	71	2.48	2.13	2.29	6	5	6	1	1	1
										2	3	3										1	3	2
June	215	249	114	7.17	8.30	3.80	26	67	11	0	0	0	63	55	60	2.10	1.83	2.00	5	5	6	0	0	0
										2	3	2										13	2	13
July	162	122	189	5.23	3.94	6.10	20	12	22	0	0	1	60	71	62	1.93	2.29	2.00	7	8	4	1	0	1
										41	9	25										9	8	4
Total	3156	2451	2630							0	0	0	2191	1475	1078							0	0	0
Averages	263	205	219	8 67	6.80	7.14							182.7	122.9	89 8	6 02	4.08	2.94						

*1 indicates year 1915-16
2 indicates year 1916-17
3 indicates year 1917-18

° The upper figure (italic) under "Daily Minimum" shows the total days in that month when the recorded number were observed; i. e.: in August, 1915, no Black Vultures were seen for 16 days.

Vultures were seen, and for same period but 21 blank days for the Turkey Vultures, while the daily maximum number of each month was 20 or more for 25 months of the 36 months under consideration for the Black Vultures, and only six months for the Turkey Vultures, thus indicating, as the daily records show, a much greater variability in the occurrence of *C. urubu*.

It is to be noted that while the yearly totals of Turkey Vultures are considerably below those of the Black Vultures the greatest number seen for any single day, covered by the whole record, was the 163 Turkey Vultures on November 7, 1915. This fact taken alone might lead to the conclusion that this species must be more numerous in our vicinity than is the Black Vulture, but as the daily records show a great excess of both species from October 14 to November 21, 1915, due to an unusual amount of available food, it seems reasonable to believe that birds of both kinds were attracted from afar.

The following table indicates the aggregate of daily minimums—0, 1, 2—for the three years, August, 1915, to July, 1918, inclusive. In no month for the entire period did the daily minimum exceed 2:

	Black Vulture			Turkey Vulture		
	0	1	2	0	1	2
August	19	0	0	5	0	0
September	6	11	0	1	13	0
October	1	12	0	0	12	2
November	3	1	1	1	4	0
December	10	0	0	3	5	0
January	10	9	0	3	15	0
February	9	6	0	0	17	4
March	4	7	0	0	13	0
April	0	14	0	0	19	0
May	0	18	0	0	24	0
June	8	0	0	6	0	0
July	5	2	0	2	26	0
Totals	75	80	1	21	148	6

These totals indicating that in the case of the Black Vulture on 75 days of the three years none was seen; on 80 days but one was seen daily, and on one day but two were noted,

while in the case of the Turkey Vulture there were but 21 blank days; one only on 148 days, and on six days but two were seen daily.

Table indicating the total of monthly enumerations for the three years arranged in numerical sequence:

Black Vulture			Turkey Vulture		
57	162	255	45	73	104
61	165	259	55	73	108
103	176	260	60	77	110
104	187	273	60	77	115
114	189	304	62	84	119
122	202	316	62	86	151
123	203	325	63	86	158
132	214	375	66	86	189
132	215	378	66	95	206
136	215	408	66	100	427
156	226	530	71	101	497
156	249	771	71	103	766

Which gives the following summary:

	Black Vulture	Turkey Vulture
Under 100 birds seen during.....	2 months	21 months
100 to 199.....	15 months	11 months
200 to 299.....	11 months	1 month
300 to 399.....	5 months	0 months
400 to 499.....	1 month	2 months
500 to 699.....	1 month	0 months
700 to 799.....	1 month	1 month

So that we find 61 per cent of the months show less than 100 Turkey Vultures seen monthly, and only 5½ per cent of the months show 100 Black Vultures seen monthly.

During the period of three years there are but eight days when no Vultures were seen, and as with but one exception such occurrences were on extremely hot or very stormy weather it may have been due to lack of observation rather than absence of the birds.

From September 23, 1917, to October 5, 1917,* inclusive, was spent at our lighthouse, eight miles down the river and located on a barren spit of the mainland.

During that time the total of Turkey Vultures seen was

* In the table of general enumeration, in order that each month should show complete, an average for the days of actual count at St. Marks during September and October, 1917, was made and added for the days during my absence at the lighthouse.

34; daily average, 2.62; daily maximum, 6.; daily minimum (2 da.), 0.

While not a single Black Vulture was seen during the period and during these thirteen days most of my time was spent out of doors with more than the usual opportunity for observation, hence the supposition seems fair that the Black Vulture shuns immediate proximity to our gulf waters. In further corroboration I find that my records for nine excursions to the lighthouse and to other points along shore show but one instance when the Black Vultures were observed, while Turkey Vultures were noted on six of these trips. I am aware that this does not agree with the experience of others and there may be some local cause.

The accompanying records show the daily occurrences for various months illustrative of

(a) Greatest numbers seen;

(b) Greatest variance of the two species;

(c) Fewest numbers seen; which was also the month showing the least variance of the two species:

	Nov. 1915		June, 1917		Aug. 1916	
Day of Mo.	Bk. V.	Tky. V.	Bk. V.	Tky. V.	Bk. V.	Tky. V.
1	68	53	6	2	1	1
2	20	8	13	2	10	5
3	28	12	6	2	0	2
4	45	30	1	0	1	1
5	20	28	1	2	0	2
6	30	25	2	1	4	2
7	142	163	1	5	6	2
8	30	20	14	1	2	1
9	20	15	2	1	3	3
10	20	19	1	1	6	3
11	12	10	1	4	6	3
12	12	20	2	2	0	2
13	10	20	0	3	0	1
14	10	20	1	1	1	5
15	60	50	2	1	5	2
16	40	50	7	3	0	0
17	30	40	31	3	0	2
18	15	25	67	3	8	2
19	40	70	42	0	3	2
20	15	30	27	3	0	1
21	40	20	3	3	0	1
22	6	4	1	1	0	3
23	3	5	0	1	0	2

24	3	3	8	1	0	4
25	2	0	5	4	0	3
26	22	7	1	1	0	1
27	3	2	2	1	0	1
28	3	2	0	1	0	2
29	12	11	1	0	4	1
30	10	4	1	2	1	1
31					0	1
Totals	771	766	249	55	61	62

From the foregoing notes the following conclusions are suggested relative to the two species of Vulture in this vicinity.

Catharista urubu occurs in greater numbers.

It is found more frequently associated and is more variable in occurrence.

It flies more direct to a feeding place and usually drops the feet and legs sometime before alighting.

It is the less numerous species close to the gulf shore.

Cathartes aura septentrionalis not as numerous in the springtime as in the fall and winter.

The two species do not usually associate intimately while feeding.

Both species may be attracted from long distances when food continues to be abundant; 142 Black Vultures and 163 Turkey Vultures were counted on one and the same day.

During a term of three years there were 75 days when no Black Vultures were seen and but 21 days when no Turkey Vultures were observed, and for the same period during 25 months the daily maximum reached or exceeded twenty in the case of *C. urubu*, and for but six months with *C. a. septentrionalis*.

Extremes of variation in the enumeration show 375 Black Vultures and 86 Turkey Vultures counted during March, 1917, and in August, 1916, the numbers were 61 Black Vultures and 62 Turkey Vultures.

SOME BIRDS ALONG THE TRAILS OF GLACIER NATIONAL PARK.

BY P. E. KRETZMANN.

Every one of our national parks is, by virtue of its name, also a refuge for the wild life of our country. And therefore, our parks are becoming places, not only for recreation and pleasure, where the stagnant air of smoky cities is replaced by the ozonized odor of pines and illimitable mountain reaches, but also for the most delightful study, under conditions which are natural and therefore approaching the ideal. The geologist roams over the peaks and the botanist searches the hills and valleys alike. But the one that makes use of all these delights and finds friends wherever he goes, is the zoölogist, and especially the bird lover.

The interest of bird study in Glacier Park is greatly enhanced by the great diversity of physiographic and climatic conditions. The difference in elevation is remarkable, that of Belton, in the southwest corner, being scarcely more than 3000 feet, while that of Mt. Cleveland, in the north-central section, is more than 10,000 feet. There are beautiful wooded lakes at low altitudes, as Lake McDonald and Lake St. Marys, but some of them are set high up amidst the peaks of the divide, as Iceberg Lake and Upper Two Medicine Lake. In the McDonald country and on the slopes of the eastern mountains there are dense forests. But then again the naturalist finds extensive mountain meadows, gay with thousands of brightly-colored flowers, with a luscious carpet of thick grass. At times, creeks and brooks and streams follow in uninterrupted succession, and then again, the path leads for miles along dry mountain sides, with never a trace of water. A large section of the Park lies in the Alpine life zone, where snow storms may be expected any day in the year. This is especially evident when one stands on Mt. Jackson, on the heights of Swift Current Pass or even on the Granite Park Plateau, and sees the endless succession of peaks as far as the eye will reach. The Hudsonian zone is marked plainly on the northern and northwestern side of the

mountains, the naked granite rocks standing out in bold relief above the scanty coniferous vegetation. The Canadian zone occupies almost the entire wooded section of the Park or as much area as all the other zones together. It is not so broad on the eastern slope as on the western side except in the Cut Bank region and along St. Marys Lake. The Transition zone is found at the mouth of almost all the canyons and in the broader valleys. And the Upper Sonoran zone is represented by some patches of prairie near Glacier Park station and in the Swift Current region, although the meadows at the foot of St. Marys Lake also show the characteristics of this zone.

It is evident, from this description, that the bird life of Glacier Park is most interesting and diversified. In a few hours, the hiker may leave the haunts of the Black-headed Grosbeak and of the Western Chipping Sparrow far behind him and find himself in a violent snowstorm, with Gray-capped Rosy Finches enjoying the weather in exuberant exultation. Or he may leave the Pine Siskins of the heights, watch the antics of the Water Ouzel below some waterfall, admire the rich plumage of the Long-tailed Chat in some wooded valley or the proud sailing of the Whistling Swan on some hidden lake, and that same evening see the Western Goldfinch flit along the shrubs of the Flathead River. Only he must remember one thing, namely, that the birds of the Park are still shy, especially in the presence of many people. The more one observes the quiet which the solemn hush of God's great out-of-doors seems to demand, the more opportunity he will have of becoming acquainted with the feathered friends of the mountains and canyons.

The following is a list of birds noted along the trails of Glacier Park in the course of two walking trips, the latter half of July, 1915, and the first half of August, 1917:

132. *Anas platyrhynchos*—Mallard. St. Marys Lake. August 9 and 10, 1917.

141. *Querquedula cyanoptera*—Cinnamon Teal. Foot of St. Marys Lake. August 10, 1917.

147. *Marila valisineria*—Canvasback. Swiftcurrent Lakes. August 13, 1917.

153. *Charitonnetta albeola*—Bufflehead. Lake in Cutbank Valley. July 19, 1915.

180. *Olor columbianus*—Whistling Swan. Two Medicine Lake. August 7, 1917.

194. *Ardea herodias herodias*—Great Blue Heron. Foot of St. Marys Lake. August 10, 1917.

242. *Pisobia minutilla*—Least Sandpiper. Near Lower Two Medicine Lake. July 9, 1915.

279b. *Dendragapus obscurus richardsoni*—Richardson's Grouse. Dry Fork Valley, foot of Rising Wolf Mountain. August 8, 1917.

304. *Lagopus leucurus leucurus*—White-tailed Ptarmigan. Below Cutbank Pass. August 8, 1917.

337b. *Buteo borealis calurus*—Western Redtail. Above Sun Camp. August 10, 1917.

352a. *Haliæetus leucocephalus alascanus*—Northern Bald Eagle. Above Grinnell Glacier. August 13, 1917.

360a. *Falco sparverius phalæna*—Desert Sparrow Hawk. Below Squaw Mountain. July 19, 1915; in Granite Park, August 14, 1917.

393e. *Dryobates villosus monticola*—Rocky Mountain Hairy Woodpecker. Side of Mount Henry. July 19, 1915.

402a. *Sphyrapicus varius nuchalis*—Red-naped Sapsucker. North of St. Marys Lake. August 10, 1917.

457. *Sayornis sayus*—Say's Phœbe. Below Squaw Mountain. July 19, 1915.

467. *Empidonax minimus*—Least Flycatcher. Lower Dry Fork Creek. August 8, 1917.

475. *Pica pica hudsonia*—Magpie. Prairie east of White Calf Mountain. August 9, 1917.

478c. *Cyanocitta stelleri annectens*—Black-headed Jay. St. Marys Lake. August 10, 1917.

484a. *Perisoreus canadensis capitalis*—Rocky Mountain Jay. Throughout higher parts of Park.

491. *Nucifraga columbiana*—Clarke's Nutcracker. Granite Park. August 14, 1917.

518. *Carpodacus cassini*—Cassin's Purple Finch. Granite Park. August 14, 1917.

524. *Leucosticte tephrocotis tephrocotis*—Gray-crowned Rosy Finch. On Mt. Henry, in snowstorm. August 7, 1917.

529a. *Astragalinus tristis pallidus*—Pale Goldfinch. Foot of St. Marys Lake. August 10, 1917. Below Squaw Mt. July 19, 1915.

533. *Spinus pinus*—Pine Siskin. Granite Park. August 13. Belton. August 15, 1917.

554. *Zonotrichia leucophrys leucophrys*—White-crowned Sparrow. Valley east of Divide. July, 1915, August, 1917.

560a. *Spizella passerina arizonæ*—Western Chipping Sparrow. Below Squaw Mountain. July 19, 1915.

567f. *Junco hiemalis montanus*—Montana Junco. St. Marys Lake. July 21, 1915, August 9, 1917.

581b. *Melospiza melodia montana*—Mountain Song Sparrow. Below Squaw Mountain. July 19, 1915.

596. *Zamelodia melanocephala*—Black-headed Grosbeak. On Mt. Henry Trail. July 19, 1915.

607. *Piranga ludoviciana*—Western Tanager. At St. Marys Camp. August 9, 1917.

615. *Tachycincta thalassina lepida*—Northern Violet-green Swallow. St. Marys Lake. August 10, 1917.

619. *Bombycilla cedrorum*—Cedar Waxwing. North of St. Marys Lake. August 10, 1917.

652. *Dendroica æstiva æstiva*—Yellow Warbler. Foot of St. Marys Lake. August 10, 1917.

683a. *Icteria virens longicauda*—Long-tailed Chat. Cut Bank Valley. July 20, 1915. August 8, 1917. McDonald Valley. August 13, 1917.

697. *Anthus rubescens*—Pipit. Granite Park and McDonald Valley. August 13-15, 1917.

701. *Cinclus mexicanus unicolor*—Dipper. Trick Falls. July, 1915. Sun Camp and Many Glacier. August, 1917.

715. *Salpinctus obsoletus obsoletus*—Rock Wren. Granite Park. August 13, 1917.

756a. *Hylocichla fuscescens salicicola*—Willow Thrush. Near Glacier Park Hotel. August 7, 1917.

759a. *Hylocichla guttata auduboni*—Audubon's Hermit Thrush. Below Squaw Mountain. August 7, 1917.

761a. *Planesticus migratorius propinquus*. Western Robin. All the valleys.

768. *Sialia currucoides*—Mountain Bluebird. Near Glacier Park Hotel, at St. Marys Lake, and at Belton. August, 1917.

BIRDS ABOUT OUR LIGHTHOUSE.

JOHN WILLIAMS, ST. MARKS, FLORIDA.

From September 22 to October 5, 1917, was spent as substitute keeper at the lighthouse on the Gulf coast at the mouth of the St. Marks River, directly south of Tallahassee, and an attempt at a census of bird life was made during that period.

A few days were lost on account of illness, with the result shown in the accompanying list. The numbers following indicate the maximum of birds of the species seen at one time.

It was too early for any but the first arrivals of aquatic migrants and as trees are extremely scarce for a mile back from the shore the smaller migratory hosts are shown in but slight evidence. As will be seen a few littorals had arrived. While the light is located on the mainland it stands on a low-lying sand flat, with only a fringe of low bushes and a few stunted oaks near at hand to attract Passerine species.

A few weeks later the list would have been augmented by numerous species of Ducks, the Geese and other Sandpipers and their associates.

Pied-billed Grebe, 1.—First record for the season.
Herring Gull, 2.—Seen only one or two days. Just arrived.
Laughing Gull, 40.—Seen daily. Resident.
Bonaparte's Gull, 3.—Only seen twice. Never numerous
Common Tern, 10.—Seen almost daily.
Black Tern, 3.—Noted on but one occasion.
Black Skimmer, 20.—Seen frequently. Usually 3 or 4 together.
Florida Cormorant, 6.—Resident. Usually numerous.
Brown Pelican, 50.—Seen frequently. Generally 2 or 3 together.
Man-o'-war Bird, 3.—Noted on but one day.
Green-winged Teal, 50.—One flock only. Just arriving.
Pintail, 20.—First arrival for the season.
Bittern, 1.—Seen but once.
Ward's Heron, 6.—Two or three seen daily. Resident.
Egret, 24.—Noted on but a single day.
Louisiana Heron, 6.—Noted frequently. Resident.
Little Blue Heron, 2.—Seen only on two occasions. Resident.
Florida Clapper Rail, 1.—Only seen the once. Resident.
Dowitcher, 50.—Seen daily with other littorals.
Least Sandpiper, 200.—Abundant daily.
Red-backed Sandpiper, 50.—Noted on several days.
Semi-palmated Sandpiper, 200.—Numerous daily. Usually with other species.
Yellowlegs, 5.—But one bunch seen.
Willet, 2.—Seen but twice. Resident. Probably about to depart.
Spotted Sandpiper, 2.—Seen on several days.
Hudsonian Curlew, 1.—But one seen.
Black-bellied Plover, 50.—Seen almost daily.
Semi-palmated Plover, 2.—But two seen.

Ruddy Turnstone, 12.—Seen on several days.

Mourning Dove, 3.—Noted three or four times.

Turkey Vulture, 6.—Seen daily except during hurricane.

Marsh Hawk, 2.—Noted almost daily.

Bald Eagle, 2.—Seen several times. Resident. Several pairs nest in the neighborhood.

Sparrow Hawk, 2.—Seen on several days.

Osprey, 2.—Noted almost daily.

Belted Kingfisher, 2.—A pair seen almost daily.

Flicker, 1.—But one seen.

Florida Night Hawk, 3.—Seen on three evenings. About time for their departure.

Gray Kingbird, 6.—Presumably a family group. Seen one day only, September 29.

Phoebe, 1.—One in lighthouse yard daily after September 30.

Fish Crow, 3.—Noted only one day. Resident and usually numerous.

Bobolink, 1.—Seen one day only.

Florida Redwing, 1.—But one seen. Usually numerous.

Boat-tailed Grackle, 25.—A bunch seen daily.

Macgillivray's Seaside Sparrow, 4.—Resident on flats back of the light.

Purple Martin, 1.—Seen but once. Migration nearly over.

Cliff Swallow, 1.—One seen on two or three occasions.

Barn Swallow, 100.—Numerous almost daily.

Tree Swallow, 150.—Numerous almost daily.

Loggerhead Shrike, 1.—But one seen.

Red-eyed Vireo, 1.—Seen one day only.

Black and White Warbler, 1.—Saw but one.

Parula Warbler, 1.—Only one seen.

Yellow Warbler, 1.—One in yard for several days.

Magnolia Warbler, 1.—One in yard for several days.

Palm Warbler, 1.—Two or three seen. Just arrived.

Prairie Warbler, 1.—One seen in yard for several days.

Redstart, 2.—Seen in yard on several occasions.

Mockingbird, 6.—Seen on but two days.

Catbird, 6.—Seen on but one occasion.

Brown Thrasher, 8.—Noted on two days.

Worthington's Marsh Wren, 3.—Resident in reeds and saw grass back of the lighthouse.

Blue-gray Gnatcatcher, 1.—Two single birds seen. Resident.

Wood Thrush, 1.—But a single bird seen.

The absence of the Black Vulture is perhaps worthy of

note, none having been seen during my stay, while eight miles up the river—at St. Marks—we have that species more numerous than the Turkey Vulture. In a daily census of these two species taken at St. Marks and continuing for nearly two and a half years the Black Vultures average decidedly the more numerous. The query arises, are the Black Vultures averse to frequenting the immediate vicinity of the coast or was it merely a coincidence that for two weeks none were seen?

The Man-o'-war birds were driven in during our share of a West Indian hurricane on September 29. These birds are rarely if ever seen inshore here, unless under such circumstances.

GENERAL NOTES

TWO UNUSUAL BIRD RECORDS FOR CENTRAL ILLINOIS.

Two rather unusual records for Central Illinois are those of the blue grosbeak (*Guiraca cærulea cærulea*), May 3-10, and of the bald eagle (*Haliætus leucocephalus leucocephalus*), May 3-20, which I obtained northeast of Rantoul, Illinois.

I observed the blue grosbeaks first, early in the morning in a low plum-bush, where a pair were quietly at rest. For a week this pair remained about the place where I first saw them, and then left.

The bald eagles frequented a walnut grove beside an old abandoned orchard until one was shot in the immediate vicinity, the other about five miles south. The wing-spread of the birds was over five feet.

The record of the blue grosbeaks was the first in many years of continuous observations; that of the bald eagle the first since 1915.

Sidney E. Ekblaw.

Rantoul, Ill.

THE PASSING OF THE BLUE GROSBEAK

(*Guiraca cærulea cærulea*).

H. T. Jackson's record in the June issue of the Bulletin, of a Blue Grosbeak in this section, recalls to mind the fact that twenty-five years ago the Dickcissel (*Spiza americana*) was very common in this part of the country.

I have not seen one in Maryland, Virginia, or parts of North Carolina that I have traveled in, for over twenty years.

The Blue Grosbeak, some years past, was rather a common breeding bird in the tidewater section, but has been getting more scarce each year, until the seasons 1917 and 1918 have gone by without my seeing a single breeding pair of them. It will be interesting to note if they follow the lead of the Dickcissel and move farther westward.

It has not been the lack of suitable breeding grounds that has kept either of these birds from our territory, for the pine timber has about all been cut off, and was followed by the small hard wood scrubby growth, so well liked and utilized by these two species.

Harold H. Bailey.

Newport News, Va.

A TAME BROWN THRASHER.

In the hope that some bird lover who has lost a tame brown thrasher may read this item and so learn something of the later life of his pet, I contribute this record of a rather unusual experiences with birds.

It was in the latter half of June that the brown thrasher first appeared at our home near Rantoul, Illinois. My mother and sister were at work on the back porch when the bird alighted on the ground. It's apparent tameness attracted their attention, and when it flew to a nearby fence-post my sister went out to it. When she approached, the bird flew to her shoulder, where it stayed contentedly for at least three minutes.

For two days it stayed about the place, not in the least afraid, in no wise concerned about household activities carried on about it. It allowed the various members of the family to pet it, while it perched upon an arm or shoulder; it ate cherries that my brother fed it, while he held it in his hand; and it showed not the least objection to having its picture taken. The second day it disappeared and we saw it no more.

We have cast about for an explanation of its unusual conduct, and can find none better than that it was a tamed bird that had strayed from its home. Our farm is a haven of refuge for all birds, so that many nest about the house, and it may be that this bird was one of the several pairs that nested near, and that had become so fearless and unafraid that it seemed tame. But if this were so the bird would hardly have appeared and left so suddenly. The more plausible and reasonable explanation would seem to be that it was a tamed bird that had wandered away from its home, and I am waiting to hear from some one who has lost his pet.

SIDNEY E. EKBLAW.

Rantoul, Ill.

TREE SPARROW AT NASHVILLE, TENNESSEE.

I wish to place on record the first occurrence of the Tree Sparrow (*Spizella m. monticola*) here. Diligent and consistent search throughout the past four winters, by myself and others, has failed to record the presence of this species. To the abnormal and prolonged cold of the past winter is no doubt due its presence south of its usual habitat. For a month following Christmas, 1917, with the exception of a few hours, the weather remained considerably below freezing, going as low as 13 degrees below zero, with deep snow constantly on the ground.

The first record was on January 13, 1918, when at least one individual of this species was seen, with juncos, in a stubble field. Having no gun I could not secure the specimen, but a week later, January 19, I visited the locality again. This time I found five or six tree sparrows in a large weed field accompanying a flock of twenty-five cardinals. All were busily gleaning weed seed, and I secured two specimens. A small flock of song sparrows were nearby, also, gathering weed seed.

The following day I flushed an individual from under an old bridge and observed it at ten feet until it flew away. Later on in the day, near the end of a long tramp, I came upon three more feeding among the weeds at the edge of a country lane. A foot of snow was on the ground and the thermometer registered 12 degrees above zero. Two of the birds flew up and allowed me to approach within ten feet, making the use of my gun unnecessary.

My next trip afield was on February 3, when toward the end of a day's tramp, and in a locality several miles from the ones above mentioned, I located a group of six tree sparrows. They were in a small hillside thicket flanked by woods to one side and cultivated fields on the other. After observing them for a time I secured a female for my cabinet. The weather in the meantime had moderated, there being but little ice formed during the week pervious. My field work having been curtailed during the balance of the month, I am unable to say how long they remained.

Under date of January 25, 1918, Mr. Ben J. Blincoe of Bardstown, Nelson Co., Kentucky, wrote me that he had seen a few there during the month. He stated that his only previous record was on March 5, 1912, when he secured a specimen, which he mounted.

A. F. Ganier.

Nashville, Tenn.

LOCAL BIRD NOTES AT AMES, STORY COUNTY, IOWA.

The notes following are culled from the fragmentary records of my hobby, kept while attending Iowa State College for two years. At all times, I used an eight-power stero-binocular in making observations.

The locality about Ames is a very favorable one for bird study, the forested valleys of the Skunk river, Squaw creek, and their tributaries, attracting all kinds of woodland birds, while the adjacent farm lands are the favored habitat of the prairie loving species. Water birds are scarce as there is only one small pond and no large lakes or marshes in the vicinity.

I have given the records of the rarer specimens only.

SPECIES LISTED.

Black-crowned Night Heron (*Nycticorax nycticorax naevius*).

On March 26, 1916, I saw one individual in "College Park," the wooded tract northwest of the campus and south of the Chicago and Northwestern Railroad. I first saw the bird flying, and later perched in a tall oak tree. Its black crown and back were very conspicuous against its lighter colored body. In some willow and honey locust trees bordering a little creek in these woods, was a colony of several bulky deserted nests about twenty to thirty feet from the ground, which I presumed belonged to this species. I was unable to return to this place until after the trees had leaved out and it was then impossible to see these herons in their tops.

King Rail (*Rallus elegans*).

Two observed at a small pond northeast of Ames, about two miles, May 20, 1917.

Sora Rail (*Porzana carolina*).

Several observed at the same pond, on the same day as above.

Florida Gallinule (*Gallinule galeata*).

One observed at the pond, May 20, 1917.

Upland Plover (*Bartramia logicauda*).

One observed at the pond, May 20, 1917.

Barred Owl (*Strix varia varia*).

About six o'clock in the afternoon of May 2, 1917, I observed one of these owls in "College Park." I watched it for several minutes through the glasses, and it then flushed as I approached, alighting again a short distance away. After watching it a little longer I again flushed it to gain a better view of its size, when it flew out of sight.

Arkansas Kingbird (*Tyrannus verticalis*).

I saw a single individual of this species in "College Park" on May 12, 1916. I am sure of its identity as I am familiar with both this species and the crested flycatcher, with which it might be confused, at my home in Sac County.

Red Crossbill (*Loxia curviostra minor*).

When a flock of eight twittering birds alighted near me in the pine forestry plantations of the college, one day in December, 1916 (I failed to record exact date), it required but a glance at their curved bills and the red plumage of three of them, to convince me that they were crossbills. About a week later I again saw them among the pine trees on the campus.

Nelson's Sparrow (*Passerherbulus nelsoni nelsoni*).

On May 20, 1917, as I was walking close to the water's edge of a small prairie pond about two miles northeast of Ames, I flushed a small sparrow heavily streaked with various shades of buff. It

flew only a few feet and I watched it through the glass for several minutes. A little further along the shore I flushed another similarly marked sparrow but with the markings somewhat paler. Reference to the sparrow illustrations in Bird Lore was required to make sure that they were male and female Nelson sparrows.

Harris Sparrow (*Zonotrichia querula*).

I saw only one individual of this species, on May 19, 1917, at the Country Club south of Ames.

Lincoln Sparrow (*Melospiza melodia maxillaris*).

I observed one April 23, 1916.

Clay-colored Sparrow (*Spizella pallida*).

I observed one April 23, 1916.

Cardinal (*Cardinalis cardinalis cardinalis*).

The cardinal is a resident species at Ames. I have the following records. One observed May 11, 1916. Four seen in "North Woods" in December, 1916. On May 20, 1917, I found a nest about six feet from the ground in a pine tree at the edge of the forestry plantations where these joined the oak woods. The female flew off with a sharp chip as I approached. I did not wish to cause her to desert the nest, so merely ascertained that it contained eggs and left immediately.

Blue-headed Vireo (*Lanivirco solitarius solitarius*).

I saw one in "College Park," May 20, 1917.

Orange-crowned Warbler (*Vermivora celata celata*).

One individual observed on the college campus, May 17, 1916.

Cape May Warbler (*Dendroica tigrina*).

One observed on the campus May 17, 1916.

Blackburnian Warbler (*Dendroica fusca*).

One individual observed on the campus May 16, 1916.

Carolina Wren (*Thryothorus ludovicianus ludovicianus*).

On May 13, 1917, while following close to the stream's edge of a small creek in "West Woods," I flushed a small brownish-buff colored bird from the water's edge. It promptly alighted and I followed, watching it explore the water's edge for some time before I decided, from its size, actions and color, that it was a Carolina Wren. I am familiar with short-billed and long-billed marsh wrens in my home county, and there was no confusing it with either of these species. On May 19, 1917, I saw another Carolina wren. This one was exploring the water's edge of the Skunk river about three miles south of Ames. On May 20, 1917, I saw three Carolina wrens about the water's edge of the small prairie pond two miles northeast of Ames. The peculiar thing about their presence here is, that except for two willow hedges some distance away, there is no timber closer than a mile.

Tufted Titmouse (*Bacolphus bicolor*).

On May 7, 1916, I approached very close to two of these birds in a tree close to Squaw creek in the "North Woods." I observed them for some time and noted that they were not nearly as active as chickadees; also that their tan colored flanks were very noticeable.

J. A. SPURRELL.

Wall Lake, Iowa.

Newport News, Va., July 7, 1918.

Editor of the Wilson Bulletin:

Mr. Shankland's article of the double Hummingbird's nest, in the June issue, recalls similar cases that have come under my notice, while spending the summers on my farm near here.

For six years a pair of Kingbirds (*Tyrannus tyrannus*) occupied the same limb on a dogwood tree on my front lawn, and for three years in succession built upon the remains of the nest from the previous year. This season they did not return, and I suppose that they must have died of old age or met some tragic fate.

Wood Pewees (*Myiochanes virens*), I have seen two double nests of; while Barn Swallows (*Hyrundo erythrogastra*), Brown-headed Nuthatch (*Sitta pussilla*), Tufted Titmouse (*Bæolophus bicolor*), Bluebirds (*Sialia sialis sialis*), House Wrens (*Troglodytes aëdon aëdon*), Carolina (*Thryothorus ludovicianus*) and Bewicks (*Thryomanes bewicki*) Wrens, and many others all use the same location, and build over or add to their old nests.

HAROLD H. BAILEY.

THE
WILSON BULLETIN
NO. 105
A QUARTERLY JOURNAL OF ORNITHOLOGY
VOL. XXX DECEMBER, 1918 NO. 4
OLD SERIES VOL. XXX. NEW SERIES VOL. XXV.

FINDING THE NEST OF THE KNOT.

BY W. ELMER EKBLAW.

To ornithologists and bird lovers the world over the most important result obtained by the recent Crocker Land Expedition to the Arctic regions was undoubtedly the discovery of the nest and eggs of the knot (*Tringa canutus*). Two full clutches of eggs, the nests in which they were laid, and the sitting birds upon them, were brought back to the American Museum of Natural History of New York.

Few eggs have been so eagerly sought as those of the knot; for a hundred years or more the nesting-places of this bird, so common on our shores in migration time, had been known to be far arctic and probably circumpolar; almost every expedition to the North for the last century has been definitely instructed to seek the nest and eggs; yet until this latest American expedition, the knots had foiled all explorers and successfully guarded the secret of their nests.

To Dr. Harrison J. Hunt, surgeon to the expedition, falls the honor of the first authenticated record of the discovery. In the early summer of 1916 he found the nest and newly-laid eggs on a high plateau almost two miles back from Thulé, the little Danish trading station on the shore of North Star Bay. His successful find came as the climax to persistent search, and study of the habits of the knot,

for two seasons previous, by the various members of the party.

During the summer of 1914, Dr. M. C. Tanquary, zoölogist of the expedition, and I were stationed at North Star Bay to study the biology and geology of the region about Wolstenholme Sound. In the course of our field work we repeatedly saw the knots at many different places. They frequented most, and were most often observed about, several small ponds near the shore not far from the trading station, but they also fed along streams far inland, and flew over the plateaus along the ice-cap. Dr. Tanquary and I were constantly on the look-out for the nests, but for a long time could find no clue as to where we might expect to find them.

About the middle of June we were returning from an all-day tramp back toward the ice-cap in pursuit of our investigations when we flushed a bird from a *dryas*-covered plateau over which we crossed on our way to headquarters. We did not then have time to search thoroughly, so we carefully marked the locality, and agreed to come back the next day to look again. The next day a violent blizzard was raging, and foul weather continued for ten days, with the consequence that we failed to go back to the plateau as soon as we had intended.

When finally the storm abated, I set out at once to the locality, bent on finding the nest. With little difficulty I found the place; but before I had approached within a hundred yards of it a pair of knots flew away. When they were out of sight I hid among the rocks and awaited their return, confident that when they came back I could readily follow them among the rocks through my powerful Leitz glasses.

I waited about a quarter of an hour, when one of the birds stooped like a hawk and alighted near the spot where I had flushed the birds when they left. Most circumspectly it slowly made its way to a little depression and nestled down. I rushed to the spot and was repaid for my long search by seeing the bird flutter away in the characteristic

sand-piper manner. But instead of the much desired eggs, I found the tiny, downy nestlings, apparently hatched only a few hours before!

In my keen disappointment I eagerly searched the whole plateau, wandering to and fro, peering into every depression, for almost eight hours, but with no success. And all further search on the days following resulted only in disappointment.

The summer of 1915 I carefully hunted over the high plateaus about Etah, and though I felt sure several times that my patience was about to be rewarded, I was doomed to discouraging failure.

Then again the season of 1916 presented another opportunity for success at North Star Bay, where I knew so well the place to look for the nests. Dr. Hunt and I were then stationed at the place, and I told him when and where we might most profitably search. When nesting-time came I was ill with a slight attack of influenza, contracted apparently from germs brought up in our summer's post, and the task of finding the eggs devolved upon Dr. Hunt.

Shortly after midnight, on June twenty-eighth, the golden sunshine of Arctic night flooding all the Northland, Dr. Hunt started back into the hills on a search for the nests. He seemed to have been gone but an hour, though morning was well advanced, when he came back exultant with the good news that he had found the nest.

As soon as I was able to go out, I went with him to the plateau; and there, just as he had left them, well marked with small cairns of stones that he had piled up, were the nest and the bird sitting upon its eggs. It did not flush until we nearly pushed it off the nest, and even then reluctantly. Before it left we photographed it on the nest, the camera scarce a yard away. We then collected the three eggs in the clutch, the nest, and the nesting bird.

A few days later, after diligent and persistent search, Dr. Hunt found another nest with four eggs on the same plateau. These two nests, so far as known, are the only nests yet definitely reported with eggs. No doubt, now that

the character of the nesting site and the habits of the bird in the nesting-time are known, other nests will be found.

The futility of former search for the nest has probably been due to two causes. The first is that the nesting-site is unusual for a shore-bird, in that it is placed high up on rocky plateaus far from the sea; the second is that the bird so closely resembles the environment in which the nest is placed that it feels sure of escaping detection, and does not flush even when in danger of being stepped upon.

MIGRATION RECORDS FOR KANSAS BIRDS.

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I.

INTRODUCTION.

The list of the birds of Kansas, published in 1913, by Mr. Bunker,[1] showed 379 species and subspecies that had been taken or authentically observed in the state. More recent unpublished revisions conducted under his direction have increased the list somewhat. The large collection of the museum and the careful manner in which the work has been done vouches for the reliability of these results.

Of the list of 379 as published 29 are accidental occurrences or are not found within the limits of the state. Ten are very rare; 79 others are listed as rare; and 23 of those remaining are subspecies or varieties, usually one eastern and the other western in distribution, which are of interest only to the taxomonist and are often not distinguishable except by computing averages of many specimens.

While all such should be taken into account in any exhaustive list of the birds of the state it is of course incorrect to say that Kansas is populated by nearly 400 species of birds. It is of course often a matter of judgment as to

[1] Kansas University Science Bulletin, Vol. 7, No. 5. June, 1913. By C. D. Bunker.

whether a given bird shall be considered very rare or rare or not rare. Besides some of the "rare" birds are as plentiful here as elsewhere in their range, but a fair consideration seems to place the number of those that can be considered bona fide Kansas birds at 220. If we include those that are rare but omit those that are very rare the list is increased to 300. Twenty-four of the not rare occur only in western Kansas, though many of this list are merely subspecies, scarcely distinguishable from the eastern form. Twenty-one occur only in the eastern part and four or more occur only along the southern border.

Analyzing the population still further we see that 42 of the 220 that are not rare are year-round residents; 98 are summer residents; 11 are winter residents only, and 82 are migrants. Here again, however, much depends upon the judgment, for many, such as bluebirds and robins and flickers migrate for the most part, but remain in small numbers; others, such as many of the migrating ducks, may occasionally spend the winter or summer with us.

It is the purpose of this paper to deal with the times of migrations and not the causes, but a word will not be amiss on this latter subject. It is almost universally agreed by those who have given the subject consideration that the primary controlling factor of migration is the food supply. Birds are better equipped than any other animals to withstand cold. But when cold weather cuts off the supply of insects and when snows threaten to cover up the plentiful supply of seeds there is nothing else to do but go where food may be had. In the spring, warblers and cuckoos may not come back until leaves appear, since they gather their food from the leaves. Flycatchers and swallows may not appear until insects are flying. Those that come early and those that spend the winter with us must have some source of food which they can depend upon. Instinct, however, which is a safe guide, comes in to supplant this primal impulse in guiding the bird's actions. Usually it does not change the time of migration a great deal, though we have many birds such as the pro-

thonotary warbler, orioles, and many others leaving just when food becomes most plentiful. Thus we see that migration is not merely a response to appetite.

II.

Materials and Methods.

The data upon which this article is based are from two sources: museum records and field observations. My thanks are due to Mr. Bunker in charge of the museum collection here, who has placed at the writer's disposal the records of the museum collection which show the date upon which each specimen in the museum was taken. These records have supplied many data, all of which are of absolute reliability. My thanks are also due to Professor Frank Smith, of the University of Illinois, for the use of his unpublished data on the migration of Illinois birds covering a period of nine years. The writer, likewise, made daily trips in the fall migration season of 1916 and the spring of 1917, making careful records of all birds observed. In this work only absolute and unquestionable identifications have been recorded. Many birds seen, especially warblers and sparrows, had thus to be left off of the records even when the identification was fairly positive. For many of the more difficult birds dependence was placed entirely upon museum specimens. The field records here reported are considered to be above question. Circumstances, likewise, did not permit much study of the water birds. Records were also kept of the weather conditions and of the places visited and of the likelihood that birds would be found and allowances made for these. Likewise, it was recorded, where significant, whether the birds were seen in one flock or in different places.

In keeping records, close attention was given to the question whether the bird was to be expected in the locality visited and whether the bird was seen or heard, since the activitiy of the bird has much to do with its discovery. If a given bird was looked for in its proper habitat and not found a circle with a dot in the center was used to in-

dicate this; two dots meant an unusually careful search. If the fewness of those found seemed to indicate early arrival or the last to remain, a square below was used to indicate this.

Unless otherwise stated the fall dates given are for the year 1916, the spring dates for 1917.

PART III.

WATER BIRDS.

Family COLYMBIDAE—Grebes.

3. *Colymbus auritus*—Horned Grebe.

A rare migrant. One specimen in the museum taken November 15, 1906, in Rice County.

4. *Colymbus migricollis californicus*—Eared. Grebe.

Not common migrant or winter resident. There are four museum records for this species from April 14 to 24.

6. *Podilymbus podiceps*—Pied-billed Grebe.

A common migrant and rare summer resident. One was taken March 12 and seven between April 3 and May 13. The fall records show 38 between September 10 and October 31, and one November 15.

Family GAVIIDAE—Loons.

7. *Gavia immer*—Loon.

A rare migrant. There are six museum records between March 27 and May 23, and one for October 27.

Family LARIDAE—Gulls and Terns.

51. *Larus argentatus*—Herring Gull.

A rare migrant and winter resident. The museum contains several specimens taken in winter and one on April 12.

54. *Larus delawarensis*—Ring-billed Gull.

A common migrant. Kansas is within the winter range, but there are no records of them in this season. The spring and fall records are not sufficient to show the range of the migration season. Specimens were taken on March 21 and 29 and four between October 12 and 22.

59. *Larus franklini*—Franklin Gull.

A rather common migrant. Seven specimens were taken by museum between April 1 and May 6 and four between October 20 and November 1.

60. *Larus philadelphia*—Bonaparte Gull.

A rare migrant. The one record is for March 6, 1903.

69. *Sterna forsteri*—Foster's Tern.

A not uncommon migrant. Kansas is within the summer range of this species, but there is no record of summer residence. There are four records between April 29 and May 11.

70. *Sterna hirundo*—Common Tern.

Rarely observed as a migrant. Kansas is within the summer range. No records in Kansas museum.

74. *Sterna antillarum*—Least Tern.

An intermittently common summer resident. No records of migration movements.

77. *Hydrochelidon nigra surinamensis*—Black Tern.

A common migrant and rare summer resident. These first observed about Lawrence in 1917 on May 7. Large numbers were daily observed between May 27 and June 4. Museum and field records are plentiful from September 3 to 14.

FAMILY PHALACROCORACIDAE—CORMORANTS.

120. *Phalacrocorax auritus auritus*—Double-crested Cormorant.

A rather common migrant. Southern Kansas is within the general winter range. There are ten museum records of this species from April 8 to May 15, and from August 27 to November.

FAMILY PELECANIDAE—PELICANS.

125. *Pelecanus erythrorhynchos*—White Pelican.

A rather common migrant. Specimens have been found in Kansas from April 16 to May 22, and from October 6 to 12.

FAMILY ANATIDAE—DUCKS, GEESE, AND SWANS.

129. *Mergus americanus*—Merganser.

A not uncommon winter resident. It has not been observed by the writer. There are a few museum records for the winter months and one for April 11.

130. *Mergus serrator*—Red-breasted Merganser.

A rare winter resident. There are museum records for April 3 and April 19.

131. *Lophodytes cucullatus*—Hooded Merganser.

A rare winter and summer resident and a common migrant. There are no data available as to migration.

132. *Anas platyrhynchos*—Mallard.

A common migrant and rare winter or summer resident. Mallards vary much in their movements, according to season. If the season be open they begin moving early in February, while in other conditions they may not begin to move till well along in March. Their stay is short, though individuals, apparently not summer residents, may remain till the middle of April. Fall migration, late September and October, and up to cold weather.

133. *Anas rubripes*—Black Duck.

A rare migrant. There are three museum records, October 21 to November 25, the latter in Pratt County.

134a. *Anas fulvigula maculosa*—Mottled Duck.

A rare migrant. One observed October 6.

135. *Chaulelasmus streperus*—Gadwall.

A common migrant and rare summer resident. Probably a rare winter resident. Five museum records between March 20 and April 11, and one for October 28; one also for February 22.

137. *Mareca americana*—Baldpate.

A common migrant and rare summer resident. Kansas is within the winter range. Museum records show migration between March 2 and April 18.

139. *Nettion carolinense*—Green-winged Teal.

A common migrant and rare winter resident. Museum and fall records show migration from March 2 to April 20, and from October 6 to November 19. There are records also for December and February.

140. *Querquedula discors*—Blue-winged Teal.

A common migrant and occasional summer resident. Abundant field notes for the spring of 1917 show first observation March 30; common April 6; still fairly common May 20. Seen in fall on October 6.

141. *Querquedula cyanoptera*—Cinnamon Teal.

As a migrant, rare in eastern Kansas, common in western Kansas. A specimen was taken in Rice County on April 24. There is no other record of time of migration at hand.

142. *Spatula clypeata*—Shoveller.

A common migrant and rare summer resident. Kansas is within the winter range. It was abundantly observed from March 15 to May 7 and on October 28.

143. *Dafila acuta*—Pintail.

Migrant and winter resident. Twenty-four specimens in the museum were taken February 12 to April 23, mostly from vicinity of Lawrence. They should return about October 1st and remain until the rivers freeze over.

144. *Aix sponsa*—Wood Duck.

Now nearly extinct. The museum contains five specimens, taken between March 15 and May 9, and specimens also on October 17 and 24.

146. *Marila americana*—Redhead.

A common migrant, remaining but a short time, in both spring and fall. Seven specimens were taken by the museum from March 6 to 28. In the fall they should return about October 1 and remain but a short time.

147. *Marila valisineria*—Canvas-back.

A common migrant. There are nine museum specimens from March 7 to April 5, which agrees with records of other localities. There are no records of fall migration at hand.

148. *Marila marila*—Scaup Duck.

A rare migrant. No data at hand.

149. *Marila affinis*—Lesser Scaup Duck.

A fairly common migrant. Twenty-three specimens have been taken by the museum between March 1 and May 22. They were observed in considerable numbers in 1917 from May 14 to May 20. The writer has no fall records.

150. *Marila collaris*—Ring-necked Duck.

A migrant now rare. It has been taken by the museum from February 12 to March 26.

151. *Clangula clangula americana*—Golden-eye.

A rare migrant. Three specimens in museum taken March 2 and 19.

152. *Clangula islandica*—Barrow's Golden-eye.

As a winter resident, rare. There are two records for December 11 and four from March 10 to 27.

153. *Charitonetta albeola*—Buffle-head.

This species is a common migrant. This state is within the winter range. There are five museum specimens taken from March 6 to 19 and one on November 9.

167. *Erismatura jamaicensis*—Ruddy Duck.

Now a rare migrant. Kansas is within summer range of this species. Twelve specimens have been taken by museum between March 28 and May 6.

169. *Chen hyperboreus hyperboreus*—Lesser Snow Goose.

A common migrant. Kansas is within its winter range. The only museum records are for April 3 and 8.

169. *Chen caerulescens*—Blue Goose.

A rare migrant. The only museum specimen bears date March 18.

171a. *Anser albifrons gambeli*—White-fronted Goose.

A common migrant. The two museum records are for February 14 and March 1.

172. *Branta canadensis canadensis*—Canada Goose.

A common migrant. This goose migrates very early, sometimes in January. The migration is over about March 15. They return in late September, October and November.

172a. *Branta canadensis hutchinsi*—Hutchin's Goose.

This goose is a common migrant. Its winter range comes within Kansas. The two specimens at museum were taken March 2 and April 3.

180. *Olor columbianus*—Whistling Swan.

A not uncommon migrant and winter resident. They have been

captured by museum on December 11, April 1, April 6, April 26, and in the winter months. They do not arrive till late in the fall.

181. *Olor buccinator*—Trumpeter Swan.

A rare migrant. The only record is for March 23, 1888.

FAMILY IBIDIDAE—IBISES.

An interesting feature of this group of heron-like birds is that the southern species, which make up the main part of the group, will often wander far north of their breeding range after nesting.

187. *Plegadis guarauna*—White-faced Glossy Ibis.

This species rarely wanders over Kansas after breeding season.

FAMILY ARDEIDAE—BITTERNS, HERONS, ETC.

190. *Botaurus lentiginosus*—Bittern.

A common summer resident. They were seen daily in 1917 after May 10, though none were observed before. Museum records, however, show specimens taken on April 4, 13, 16, 23, 26, 28 and 30. The thoroughness of the field work in April over regions where they later appeared makes it seem probable that they came later this year on account of the backwardness of the season. The last museum record is November 5. Records of other states make it appear probable that they remain somewhat later.

191. *Ixobrychus exilis*—Least Bittern.

A not uncommon summer resident. They come later and leave earlier than the last. Four specimens in museum taken between May 14 and 28. Records from other states would make it probable that they come somewhat earlier.

194. *Ardea herodias herodias*—Great Blue Heron.

A common summer resident. Museum and field records show residence from March 20 till September 15. Other states show records which makes it seem probable that they come somewhat earlier than this and remain somewhat later.

196. *Herodias egretta*—Egret.

After the breeding season is over, egrets, whose summer home is considerably south of Kansas, will not infrequently wander over the state.

197. *Egretta thula thula*—Snowy Heron.

This heron likewise wanders over Kansas after the close of the breeding season.

200. *Florida cærulea*—Little Blue Heron.

This bird rarely strays over the state after the breeding season.

201. *Butorides virescens virescens*—Green Heron.

A common summer resident. Museum and field notes show the first arrival as April 27. They begin to leave about September 1; the last record being September 16.

202. *Nycticorax nycticorax nævius*—Black-crowned Night Heron.

A rare summer resident. The first museum record is April 8; the last September 28. They probably remain later.

203. *Nyctanassa violacea*—Yellow-crowned Night Heron.

Rare as summer resident. They probably come later than the last.

FAMILY GRUIDAE—CRANES.

204. *Limnogeranus americanus*—Whooping Crane.

A rare migrant. The one museum record is for October 13, 1906, in Ford County, Bucklin.

205. *Grus canadensis*—Little Brown Crane.

A common migrant, but not seen by writer in 1917. The one specimen at museum bears date of April 1.

206. *Grus canadensis mexicana*—Sandhill Crane.

A common migrant. They should pass through about March 15 to May 15 and return from about September 20 on into November. The writer has seen them in the first half of May.

FAMILY RALLIDAE—RAIL, GALLINULES AND COOTS.

208. *Rallus elegans*—King Rail.

A common summer resident. Museum and field notes give April 11, 17 and 23 and indicate the date of spring arrival. The last fall record is October 10.

212. *Rallus virginianus*—Virginia Rail.

This rail is a common migrant and a very rare summer resident. The writer has no records of this species. The notes from other states show that it should come about May 1 and return about September 15. Each season of migration is brief.

214. *Porzana carolina*—Sora.

A common summer resident. Museum and field records show that they arrive about May 10 (earliest record May 11) and are common thereafter. They leave mostly in September. The last museum record is October 10.

215. *Coturnicops noveboracensis*—Yellow Rail.

A rare summer resident. The only museum records are April 6 and 18 and October 1.

216. *Creciscus jamaicensis*—Black Rail.

Classed as a rare summer resident. No records of migration.

218. *Ionornis martinicus*—Purple Gallinule.

Occasional; probably wanders after breeding season, since Kansas is north of regular breeding area.

221. *Fulica americana*—Coot.

A common summer resident. The coot varies greatly from year to year in migration movements. None were seen in 1917 till May 10, after which they were observed daily. They have been taken on March 29. One specimen in museum bears date of October 10.

FAMILY PHALAROPODIDAE—PHALAROPES.

223. *Lobipes lobatus*—Northern Phalarope.

A rare migrant. No records.

224. *Steganopus tricolor*—Wilson's Phalarope.

A common migrant. The earliest record of Wilson's Phalarope is April 24. They were common until May 15, and there is one record for May 29. According to notes from other localities the female should begin returning south the middle of July, and the males and young should be gone for the most part by the middle of August.

FAMILY RECURVIROSTRIDAE—AVOCETS AND STILTS.

225. *Recurvicostra americana*—Avocet.

A common migrant and rare summer resident. Museum records for this species are as follows: April 11, Douglas County; April 16, southern Kansas; April 24 (2), Rice County; October 3, Douglas County; October 20, Osborne County.

FAMILY SCOLOPACIDAE—SNIPES, SANDPIPERS, AND CURLEWS.

230. *Gallinago delicata*—Wilson's Snipe.

A very common migrant. In 1917 they first appeared on March 27. Thereafter they were abundant until April 24, when they became distinctly fewer in numbers, though still fairly common. The last specimen was seen on May 21. One was collected in Pratt County on March 1. Incomplete fall records show presence from October 10 to 22. They probably continue until well into November.

232. *Macrorhamphus griseus scolopaceus*—Long-billed Dowitcher.

A common migrant. It was not observed in the field by the writer. There are museum records for April 18 and 29, and October 6 and 10.

233. *Micropalama himantopus*—Stilt Sandpiper.

A common migrant. It was not observed in the field. The museum records for April 28, May 1, 9, September 9, and October 10, are too incomplete to indicate the range of migration.

239. *Pisobia maculata*—Pectoral Sandpiper.

A common migrant. Abundant records from March 16 to May 21 show that this is the period of spring migration. They should return in September and October. The one fall record is for November 3.

240. *Pisobia fusicollis*—White-rumped Sandpiper.

A common migrant. Abundant spring records show them present from April 29 to May 17. One specimen was taken in Clark County June 10.

241. *Pisobia bairdi*—Baird's Sandpiper.

A migrant not common. There are five records in the museum catalogue from April 11 to 19.

242. *Pisobia minutilla*—Least Sandpiper.

A common migrant. Museum records extend from April 22 to May 21. Field observations in 1917 show them common only in the early part of May. No data at hand on fall movements.

243a. *Pelidna alpina sakhalina*—Red-backed Sandpiper.

A rare migrant. The one museum record is May 11, 1885.

246. *Ereunetes pusillus*—Semipalmated Sandpiper.

A common migrant. This species was not identified in the field. Twenty museum records extend from April 29 to May 20.

247. *Ereunetes mauri*—Western Sandpiper.

An occasional migrant. Nine museum records extend from May 1 to June 1.

249. *Limosa fedoa*—Marbled Godwit.

An occasional migrant. The only record is for Shawnee County, April 21.

251. *Vetola hæmastica*—Hudsonian Godwit.

A rare migrant. Ten museum records are from April 19 to May 13.

254. *Glottis melanoleuca*—Greater Yellow-legs.

A common migrant. Abundant museum and field records show the migration to be from March 26 to April 21. One was observed May 13. The only fall records at hand are for September 29 and October 29.

255. *Iliornis flavipes*—Yellow-legs.

This species, likewise, is a common migrant. The first record is on March 29. They are abundant on the records from April 16 to June 1. The fall migration should be in August and September.

256. *Helodromas solitarius solitarius*—Solitary Sandpiper.

A common migrant. Abundant museum and field records show the spring migration to be from April 6 to May 14. Three fall records are at hand, July 29, September 19, October 5.

258. *Catoptrophorus semipalmatus semipalmatus*—Willett.

An occasional migrant. The specimens were taken on May 6, 1909.

258a. *Catoptrophorus semipalmatus inornatus*—Western Willett.

Also an occasional migrant. Five specimens were taken by museum from April 24 to 27, and two in Pratt County on May 3.

261. *Bartramia longicauda*—Upland Plover.

A fairly common summer resident. They should arrive in April and leave about September 1.

262. *Tryngites subruficollis*—Buff-breasted Sandpiper.

A rare migrant. The only two records at hand are for April 29.

263. *Actitis macularia*—Spotted Sandpiper.

A common summer resident and more abundant migrant. They were very abundant in 1917 from May 1 to 20. Specimens were taken by museum in previous years on April 7 and 20. They should leave early in September.

264. *Numenius americanus*—Long-billed Curlew.

A common migrant and rare summer resident. They were not observed in field by writer. The migration should be mainly in May and September. One museum specimen taken April 19.

FAMILY CHARADRIIDAE—PLOVERS.

270. *Squatarola squatarola*—Black-bellied Plover.

An occasional migrant. There are two museum records, May 22 (Wichita County), and October 29.

272. *Charadrius dominicus dominicus*—Golden Plover.

Common spring migrant. In the fall, however, it flies from Canada across the Atlantic to South America. This species was not observed in the field by the writer. Its migration should be mostly in April. Specimens have been taken by the museum on March 29 and April 1. One was also taken on October 23, 1910, which would indicate that rarely they return south by the inland route.

273. *Oxyechus vociferus*—Killdeer.

An abundant summer resident. In 1917 it was observed abundantly in the field on April 13, and daily thereafter. They leave for the most part by the middle of October, though one specimen in museum bears date of November 27.

274. *Charadrius semipalmatus*—Semipalmated Plover.

A migrant, but not common. Twelve specimens have been taken by the museum from April 22 to May 15, and one on September 19.

277. *Charadrius melodus*—Piping Plover.

Rare. Kansas is within the breeding ground. One specimen taken by the museum on April 27.

278. *Leucopholus nivosa alexandrinus*—Snowy Plover.

A rare summer resident in southwestern Kansas. One was taken in Douglas County April 22. Three were captured in Clark County on June 6.

281. *Podasocys montanus*—Mountain Plover.

A common summer resident in western Kansas. The only migration record of the museum is one taken in Haskell County on May 15.

(Continued in March issue.)

REVISORY NOTES ON THE LIST OF THE BIRDS OF NEBRASKA.

BY MYRON H. SWENK.

In November, 1914, the writer presented a list of the native birds known to occur or to have occurred within the present limits of the state of Nebraska, and this list was published in the "Nebraska Blue Book" for 1915, early in that year. In this list 418 species and subspecies were recorded for the state. During the four years since the compilation of this list, considerable field work has been carried on by several of the members of the Nebraska Ornithologists' Union, and at the same time many of the older records have been critically reviewed. As a result of these activities, it now seems necessary to add fifteen birds to the 1914 list and to drop six birds from it, while the breeding of four birds within the state which were not or not definitely classified as breeders in 1914 has been established. The data on which these changes rest is briefly included in the following notes:

Western Grebe (*Aechmophorus occidentalis* (Lawrence)).—On June 3, 1916, Mr. Cyrus Black found three nests of this grebe at Island Lake, north of Oshkosh, Garden County, Nebhaska, one containing three fresh eggs, one four nearly fresh eggs, and one five eggs nearly ready to hatch, with a newly hatched bird near by. The male parent and the young bird, together with the nest with four eggs, were collected and are now in Mr. Black's collection. The next year, 1917, Mr. Black and Mr. A. M. Brooking took a female western grebe and five sets of fresh eggs, with nests, in a small lake in Garden County, on June 19. These are the first records of the breeding of this bird in the state.

Black-throated Loon (*Gavia arctica* (Linnaeus)).—All of the several statements concerning the occurrence of the black-throated loon in Nebraska depend back upon the record published in 1904 (Birds of Nebraska, p. 17) of a specimen taken at Curtis, Frontier County, and now in the Rees Heaton collection at that place. At the request of the Biological Survey this specimen was subjected to a careful study. It is in immature plumage and resembles in size and the broad edgings of the back feathers immature specimens of the black-throated loon, but Dr. H. C. Oberholser pronounced

it to be an immature common loon (*G. immer*) after an examination of the specimen. Accordingly, this species is to be stricken from the Nebraska list, as, in fact, it probably will be from most of the other lists of the United States, for the real winter home of this bird is in Asia and no authentic records of *G. arctica* for this county seem to exist.

Water Turkey (*Anhinga anhinga* (Linnaeus)).—This bird is now definitely to be added to the Nebraska list, as on September 20, 1913, Mr. Oscar Blevins caught one with a fish spear on the Loup river in Buffalo County, on the Josh Woods ranch. It was mounted by the Northwestern School of Taxidermy at Omaha, and it as present in the B. J. Olsen collection at Kearney.

Red-legged Black Duck (*Anas rubripes rubripes* (Brewster)).—The decision that this is a valid subspecies (cf. Oberholser, Auk, XXXIV, pp. 192-194) reinstates it in the Nebraska list on the basis of records already published (cf. Swenk, Auk, XXII, p. 319) as well as several additional unpublished records.

Glossy Ibis (*Plegadis falcinellus* (Linnaeus)).—This bird was included in Prof. Bruner's list (1896) and in subsequent lists on the strength of a specimen taken near Omaha, now in the University Museum, and later two specimens in the L. Sessions collection, taken at Norfolk, were also referred to this species. An examination of all three of these specimens shows them to be immature birds, and, as Dr. Oberholser informs me, neither he nor Mr. Ridgway have been able to discover any character by which the immature birds of *P. falcinellus* and *P. guarauna* can be distinguished, and as the latter species has several unquestionable Nebraska records, the propriety of dropping the glossy ibis as a Nebraska bird is evident.

White-faced Glossy Ibis (*Plegadis guarauna* (Linnaeus)).—About the middle of May, 1916, several white-faced glossy ibises appeared at the large lagoon near Inland, Clay County, Nebraska. On June 4, Messrs. A. M. Brooking and Edward Wallace set out to secure a pair of these birds, and, while attempting to approach them, met a farmer who had just driven out into the lagoon in his buggy and who reported that he had flushed an ibis from a nest containing four eggs. The nest was located by Brooking and Wallace and the bird was observed to return to it. The nest and eggs were then collected, and later both the female and male birds were also taken. This is the first record of the breeding of this bird in the state.

Wood Ibis (*Mycteria americana* (Linnaeus)).—There have been several reports of the seeing or shooting of wood ibises in Nebraska, but most of these have been alone insufficient to definitely place the bird on the state list. In April, 1885, Mr. William Townsley shot one of these birds in Hamilton County, Nebraska, on Sec-

tion 19, of Township 9, Range 6. It was a young bird, but Mr. Townsley succeeded in mounting it very satisfactorily, and it is now in the A. M. Brooking collection at Grand Island College. This, together with other undoubted records of the occurrence of this bird where the specimens were unfortunately not preserved, entitles it to inclusion in the Nebraska list.

Ward Great Blue Heron (*Ardea herodias wardi* (Ridgway)).—A male specimen of this heron, examined and identified by Dr. Oberholser, was collected at Curtis, Frontier County, and is now in the Rees Heaton collection at that place. It presents the following measurements: Wing, 506; culmen, 158; depth of bill at base, 31.5; tarsus, 203. This form of the great blue heron has not previously been recorded from Nebraska.

Red Phalarope (*Phalaropus fulicarius* (Linnaeus)).—This bird was included in the 1915 Nebraska list on the basis of the bird supposed to have been shot on a sand bar in the Missouri river below Sioux City in November, 1912, reported by Prof. T. C. Stephens (Antea, XXVI, p. 103). The subsequent discovery that the specimen was collected near McCook lake, above Sioux City in South Dakota, as corrected by Prof. Stephens (Antea, XXVIII, p. 92) makes necessary the elimination of this species from the Nebraska list.

Wilson Snipe (*Gallinago delicata* (Ord)).—In the spring of 1915 Mr. C. A. Black flushed a Wilson snipe from a grass tuft in a bog near Shafer Lake, in Garden County, Nebraska, and shot it. In the grass tuft he found four eggs, just hatching. The bird, nest and fragments of the eggs are in his collection at Kearney at the present time.

Northern Long-billed Curlew (*Numenius americanus occidentalis* (Woodhouse)).—In the August Eiche collection at Lincoln are five long-billed curlews, all from Nebraska, three of which Dr. Oberholser has identified as *N. a. americanus* and two as *N. a. occidentalis*, thus establishing the place of both forms on the Nebraska list. The breeding form is *N. a. americanus*.

Eastern Mourning Dove (*Zenaidura macroura carolinensis* (Linnaeus)).—All of the specimens of the mourning doves from Nebraska seem best referable to the western subspecies, *Z. m. marginella*, so, for the present at least, the eastern form had best be dropped from the state list.

Mississippi Kite (*Ictinia mississippiensis* (Wilson)).—The record of the taking of a specimen of this bird in Nebraska has already been published by the late Prof. B. H. Bailey (Antea, XXVII, pp. 407-408).

Western Goshawk (*Astur gentilis striatulus* (Ridgway)).—Of twenty-seven goshawk records for Nebraska (of which nine were

made in the fall and winter of 1916-17), twenty-one are *A. g. atricapillus* and six are best referred to *A. g. striatulus*. Dr. Oberholser has seen and identified some of these birds. Three of the *striatulus* specimens are quite typical. This bird has not previously been definitely included in the Nebraska list.

Northwestern Horned Owl (*Bubo virginianus lagophonus* (Oberholser)).—During the winter of 1916-17 a very large and dark horned owl was killed at Lisco, Garden County, Nebraska, and sent to Mr. C. A. Black, of Kearney, for mounting. It was purchased by Mr. Black, and later disposed of to Mr. A. M. Brooking, of Inland, along with a somewhat smaller and less dark specimen killed at Imperial, Chase County, Nebraska, October 28, 1917. Both birds have been studied by Dr. H. C. Oberholser, at Washington, and referred to the above subspecies. The Lisco bird is a female, with a wing of 390 mm., while the wing of the Imperial bird, also a female, is 382 mm. long. This substantiates the inclusion of a fourth subspecies of great horned owl in the Nebraska list, viz., *B. v. virginianus* as a resident bird in eastern Nebraska, *B. v. occidentalis* (= *B. v. pallescens*, in part, of A. O. U. Check-List) as a resident bird in western Nebraska, spreading eastward across the state in the fall and winter, *B. v. subarcticus* as a winter visitor from the north, and *B. v. lagophonus* (= *B. v. saturatus*, in part, of A. O. U. Check-List) as a winter visitor from the northwest. This latter subspecies has not before been authoritatively identified from Nebraska specimens.

California Cuckoo (*Coccyzus americanus occidentalis* (Ridgway)).—The birds of western Nebraska previously identified as *C. a. occidentalis* have been examined by Dr. Oberholser and referred to *C. a. americanus*. The California cuckoo is, therefore, to be eliminated from the Nebraska list.

Alpine Three-toed Woodpecker (*Picoides americanus dorsalis* (Baird)).—This bird is added to the Nebraska list through a male specimen taken seven miles west of Scottsbluff, Scottsbluff County, Nebraska, June 15, 1916, by C. E. Mickel and R. W. Dawson. Identification confirmed by Dr. Oberholser.

Black-chinned Hummingbird (*Archilochus alexandri* (Bourcier & Mulsant)).—In August, 1903, Mr. C. A. Black secured a female of this species at Kearney, Buffalo County, Nebraska. The specimen has been examined and the above identification corroborated by Dr. Oberholser. The mounted specimen is now in the B. J. Olsen collection at Kearney.

Western Wood Pewee (*Horizopus richardsoni richardsoni* (Swainson)).—On June 18, 1916, in company with Messrs. C. E. Mickel and R. W. Dawson, the writer found this bird common in the woods along the North Platte river at Henry, Scottsbluff County, Ne-

braska, and completed nests, however all without eggs, were found, thus placing the bird definitely as a breeder within our borders.

Black-headed Jay (*Cyanocitta stelleri annectens* (Baird), and Long-crested Jay (*Cyanocitta stelleri diademata* (Bonaparte)).—In April, 1891, Prof. Bruner saw, but did not secure, a jay of the species *Cyanocitta stelleri* on the timber reserve west of Fort Robinson, in Sioux County, Nebraska. This bird he referred to *C. s. annectens* (Notes on Nebr. Birds, 1896, p. 118) on the basis of greatest probability. In October, 1916, Ora Randall and Lester Goldberry shot a jay while it was feeding along the water's edge on the bank of the Tri-state canal near Mitchell, Scottsbluff County, Nebraska. They very generously donated this specimen to the University collection, and Dr. Oberholser has identified it as *C. s. diademata*. This throws a very serious doubt on the correct subspecific identification of the bird seen by Prof. Bruner, and for the present *annectens* had probably best be dropped from the Nebraska list and the Sioux County record referred to *diademata*.

Northern Red-winged Blackbird (*Agelaius predatorius arctolegus* (Oberholser)).—This recently described race, as yet unrecognized by the A. O. U. Committee, occurs infrequently as a migrant in eastern Nebraska.

Spurred Towhee (*Pipilo maculatus montanus* (Swarth)).—On October 5, 1915, a towhee was brought to Prof. Wilson Tout, Superintendent of Schools, North Platte, Lincoln County, Nebraska, which he recognized as different from the common Arctic towhee (*P. m. arcticus*). The bird was badly decomposed and its feathers were falling out, so that it could not be saved, but Prof. Tout forwarded an outer rectrix and a foot to me for examination. Comparison with a series of the Arctic towhee in the University collection indicated that the bird must have been the spurred towhee, but to make the identification certain the feather and foot were submitted to Dr. H. C. Oberholser, and he, after comparison with the series at Washington, stated that these parts were from *P. m. montanus*. This constitutes the first definite record of the spurred towhee for Nebraska.

Alaska Yellow Warbler (*Dendroica aestiva rubiginosa* (Pallas)).—On May 15, 1901, Mr. R. Mullen collected an adult male yellow warbler at Child's Point, near Omaha, in Sharpy County, Nebraska. The unusually dark color of the upper parts of this bird caused me to send it to Dr. H. C. Oberholser for accurate identification, and he reported it to belong to the above form. This specimen is now in the University collection. Later, Dr. Oberholser pronounced a mounted adult female bird collected by Mr. A. Eiche at Greenwood, Cass County, on May 13, 1907, and now in his collection, as also

representative of the Alaskan form. A third specimen is in the Rees Heaton collection and presumably was taken at Curtis, Frontier County, Nebraska. Apparently this previously overlooked form of the yellow warbler is not rare as a migrant through Nebraska in middle May.

Desert Bewick Wren (*Thryomanes bewickii eremophilus* (Oberholser)).—On April 21, 1915, Mr. C. A. Black collected a specimen of this wren at Oshkosh, Garden County, Nebraska, thus adding a new bird to the Nebraska list. The identification is by Dr. H. C. Oberholser. This form is regarded by the A. O. U. Committee as not separable from *T. b. bairdi*.

This gives a list of 427 species and subspecies for Nebraska, as the avifauna of this state is at present understood.

POSTPONEMENT OF ANNUAL MEETING

On account of the prevalence of the "Spanish" influenza, and also on account of the financial stringency due to the Government bond issue, it has seemed wise to postpone or possibly omit the 1918 annual meeting.

General Notes

BIRD-KILLING CATS WILL BE KILLED.

The following interesting clipping has come to our desk:

Cats with a fondness for birds are in danger, for Governor Whitman has signed a bill providing for their destruction. "Any person over the age of twenty-one years," reads the law, "who is a holder of a valid hunting and trapping license, may, and it shall be the duty of a game protector or other peace officer, to humanely destroy a cat at large found hunting or killing any bird protected by law or with a dead bird of any species protected by law in its possession; and no action for damages shall be maintained for such killing."

Cat bills of many varieties have, in the past, been presented to different state legistures. Some have called for bells on cats, some for collars and licenses, but the present law is the first to be passed in any state. Its promoters have framed it with the idea of attacking, not the well-fed and cared-for house pet, but the wandering, hunting, or homeless cat, which has become so great a menace to our wild-bird life.

Figures gathered by the Conservation Commission indicate that common cats cause more destruction among insectivorous and game birds than any other agency. The present law is intended to encourage all persons, who are sufficiently responsible to carry a gun, to aid in checking the numbers of bird-hunting and bird-killing cats. The new law goes into effect immediately.

NOTES FROM LAKE COUNTY.

Occurrence of Northern Phalarope.—While out on the breakwater, September 29, where of late years I have discovered a number of rare species, I found my first Phalarope swimming along close to the stones, and feeding from the algae growing thereon. I kept just above the bird while he swam along and fed until we reached the lighthouse at the end. The bird was in fall plumage, but still had a strong wash of rufous on sides of neck.

Arctic Three-toed Woodpecker.—While walking through the cemetery on October 31 (1918) I found a fine male bird of this species working on a live hemlock and not six feet above the ground when first discovered. I had approached within ten feet of the tree, but stopped upon hearing the strong taps of a woodpecker and a rather unfamiliar "chick-chick" as the bird worked on the other side. He finally moved around to my side of the tree, and while trying to place his identity from the first indistinct side view, he suddenly looked square in my direction and I was dumfounded

to see a yellow crown patch glowing like a gold coin. He did not leave the tree nor ascend above fifteen feet during my stay, and in fact must have been there all day, if not longer, for the bark on one side was chipped off and pecked full of holes from the ground to a height of thirty feet, as was also another hemlock and a white pine close by. I certainly never expected to meet with my first Arctic Woodpecker in October, and it is more to be wondered at since the month was very mild, with no heavy storms.

Holbœll's and Horned Grebes.—I wish to correct a statement made by me in the December, 1916, Bulletin concerning the (apparent) abundance of Holbœll's Grebe for October of that year; and to give the true status of the two species as I have found them to occur *here* along the lake. January 30, 1913, while seated on the end of the pier at Fairport, a Holbœll's Grebe approached until finally it was just below me in the open water that extended a short distance out in the lake. My notes taken on the spot, at such close range, gave an ideal description of the Holbœll's winter plumage and the length was easily computed to be at least twenty inches. The bill was described as being "long, sharp and yellow at the base, at least two inches long." The following January (1914) a bird of this species was shot by a local hunter and I examined the bird, which tallied closely with the one of the winter before. So much for the Holbœll's.

In October, 1916, a number of grebes were seen on the lake, which I reported as Holbœll's; but later I suspected I had been mistaken and that they were the Horned Grebe in fall plumage. However, it was not until this fall (1918) that I was able to measure and examine a number of specimens killed by hunters. I found my suspicions to be correct, they all proved to be the Horned. So the status of the birds stand as follows. The Horned Grebe is a rather common spring and fall migrant. I counted over twenty one day in October of 1917 around the piers at Fairport. The Holbœll's may be designated as rare and occurring on the lake during the winter months when there is open water. It is a much larger bird than the Horned and with a decidedly longer bill, and not so white on the neck; but at a distance on the dancing waves the Horned Grebe looks larger than he really is—probably because of the long neck, which is usually stretched its full length.

E. A. Doolittle.

Painesville, Ohio.

THE OSPREY AT CHICAGO, ILL.

The occasions are rare when one observes the Osprey in the vicinity of Chicago. The writer does not recall having ever observed it a half dozen times in thirty years, although he remem-

bers clearly that two of his boyhood friends had single specimens which they had killed in this vicinity. In Chapman's book Mr. B. F. Gault is credited with two observations at Glen Ellyn. Curiously one of the dates (given specifically in Mr. Woodruff's list of birds of this area) was May 15, 1894. On the same date of the present year, in a district quite as characteristic of prairie environment as Glen Ellyn—viz., Chicago Ridge, it was my good fortune to observe an Osprey in the act of fishing, to observe the catch and to see the fisher, after adjusting his prey so as to carry it parallel with his body, bear it high aloft and far away until both bird and burden were lost to sight.

Preparing to leave the field near the Calumet feeder of the old Illinois and Michigan canal I noticed the Osprey poised above the channel. I saw at once that he was about to plunge, but a fringe of old cat-tails obscured my view of him when he struck the water. With good glasses I saw him rise presently and could even see the yellow belly of the struggling cat-fish he had seized. A single redwing harassed him for a moment, he turned in my direction, and twisting the fish about as remarked above, he flew over my head and passed rapidly northward.

Almost I was prepared to realize in fact my old "fourth reader" story and to see a bald eagle come swooping upon the fish hawk out of the clouds. Perhaps in another thirty years I may see that too!

EDWARD R. FORD.

SOME OHIO RECORDS AND NOTES.

Wood Ibis (*Mycteria americana*) in Clinton County.

Writing under date of April 4, 1916, Orange Frazer reports the capture of a young bird of this species near Wilmington, on July 23, 1909. It was held in captivity for some days, but was finally released. It is reported to have died shortly after it was released. An account of this capture was published in an issue of the Wilmington, Ohio, Journal-Republican at some date subsequent to April 4, 1916. This account is stated to be a reprint from an issue of the Clinton Republican of July 1, 1909. The boys who made the capture were Howard Bryan and Willard Wildman. The account includes a full description with careful measurements. There seems to be no doubt about the correctness of the identification.

Pacific Loon (*Gavia pacifica*) in Ashtabula County.

On page 286 of Vol. 34 of the Auk, in F. Seymour Hersey's discussion of "The Status of the Black-throated Loon (*Gavia arctica*) as a North American Bird," I find this quotation from myself: "Dr. Wheaton mentions the capture of one specimen, but on hearsay evidence. I had several reports of specimens captured by trust-

worthy persons, but I cannot vouch for them personally. A specimen was sent to me two years ago from Painesville, purporting to be a Black-throated, but I did not make it out as such, and so sent it to Oberholser, who pronounced it a Red-throated." I could never make the specimen out anything but a Pacific (*Gavia pacifica*), hence the record was never published. Upon an inquiry about the specimen from Mr. A. C. Bent, the description and measurements were sent to him, with an offer of the specimen should he desire to examine it. In reply Mr. Bent states that there can be no question that the specimen is *pacifica*. Therefore this is the first Ohio record for this species.

The bird was shot by some fishermen at Ashtabula Harbor, on February 19, 1909, and was sent to the Oberlin College museum by Dr. A. W. Hopkins. Lynds Jones.

THE FALL MIGRATION OF 1918 IN NORTHERN OHIO.

Winter rarely begins in earnest in northern Ohio before the first week in December. At the present writing (December 6) the ground is still unfrozen, the grass is green, many hardy plants are still growing. There have been two light falls of snow, which would be called hardly more than traces, because they disappeared during the day after the fall occurred.

In marked contrast, the middle of October, 1917, witnessed the beginning of that memorable cold winter season. But preceding that early wintry weather there had been weeks of unusually low temperature, during which most of the insectivorous birds left for their winter homes. As far as the bird life was concerned winter had set in during the middle of October.

In spite of the late frost and the almost continuous warm weather of September and October, 1918, the southward movement of the birds occurred this year at the same time that it did last year. It seemed strange indeed to go into the woods in October, when warblers and sparrows and thrushes may usually be found, and meet only the regular winter birds, grouped in their regular companies.

If it be true that the experience of one unfavorable season is enough to cause an early migration the next season, even when the conditions are favorable for a later stay, it would seem that the point that young birds migrate because of the example set by the older birds is well taken. Lynds Jones.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of The Wilson Bulletin, published quarterly at Oberlin, Ohio, for October 1, 1918.

State of Ohio,

County of Lorain, ss.

Before me, a notary public, in and for the State and county aforesaid, personally appeared Lynds Jones, who, having been duly sworn according to law, deposes and says that he is the editor of The Wilson Bulletin and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Lynds Jones, Oberlin, Ohio.

Editor, Lynds Jones, Oberlin, Ohio.

Managing Editor, Lynds Jones, Oberlin, Ohio.

Business Manager, George L. Fordyce, Youngstown, Ohio.

2. That the owners are:

Wilson Ornithological Club.

Myron H. Swenk, President, Lincoln, Nebraska.

George L. Fordyce, Vice-President, Youngstown, Ohio.

W. F. Ganier, Secretary, Nashville, Tennessee.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are:

Not a gainful publication.

LYNDS JONES.

Sworn to and subscribed before me this 12th day of October, 1918.

[seal] CHARLES A. HAMMOND.

(My commission expires March 23, 1920.)

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THE WILSON BULLETIN

VOL. XXX MARCH, 1918 NO. I

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No. 102

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THE WILSON BULLETIN

published quarterly, March, June, September, December, as the organ of the Wilson Ornithological Club and the Nebraska Ornithologists Union, is edited by Dr. Lynds Jones.

Terms:—$1.00 a year, including postage, strictly in advance. Single numbers 30 cents. Free to all members not in arrears for dues.

The Office of Publication is No. 48 South Main St., Oberlin, Ohio. Subscriptions may be addressed to Geo. L. Fordyce, Youngstown, Ohio, Business Manager, or to Frank M. Phelps, 212 East 4th St., Elyria, Ohio, Treasurer.

All articles and communications intended for publication and all books and publications for notice, should be sent to Dr. Lynds Jones, Spear Laboratory, Oberlin, Ohio, in time to reach Oberlin at least four weeks before the date of the number for which they are intended.

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Entered as Second Class Matter, July 13, 1916, at the Postoffice at Oberlin, Ohio, under the Act of March 3, 1879.

THE WILSON BULLETIN

VOL. XXX JUNE, 1918 NO. 2

OFFICIAL ORGAN OF

THE WILSON ORNITHOLOGICAL CLUB

and THE NEBRASKA ORNITHOLOGISTS' UNION

(In Affiliation)

No. 103

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VOL. XXX SEPTEMBER 1918 NO. 3

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Entered as Second Class Matter, July 13, 1916, at the Postoffice at Oberlin, Ohio, under the Act of March 3, 1879.

THE WILSON BULLETIN

VOL. XXX DECEMBER, 1918 NO. 4

OFFICIAL ORGAN OF

THE WILSON ORNITHOLOGICAL CLUB

and THE NEBRASKA ORNITHOLOGISTS' UNION

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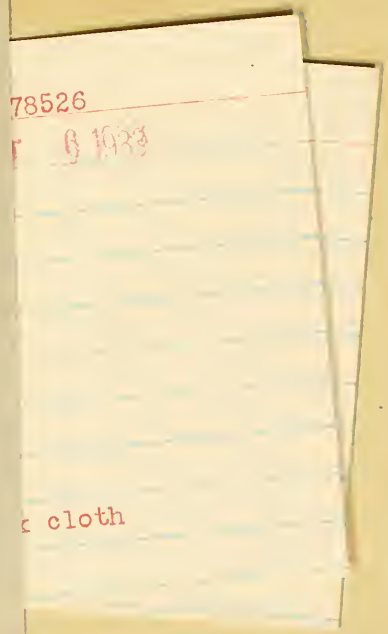
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